

Developing world arrivals down

by Ngalo Crequer

The first comprehensive analysis of overseas students in universities since the introduction of full cost fees shows a decline in the number of students from developing countries.

The survey, which has been prepared by the Committee of Vice-Chancellors and Principals from the information received from the University Grants Committee reveals that there were 344 fewer undergraduates, and 1,224 postgraduates in 1980-81 compared with the previous year.

The decline is much greater if present numbers are compared with peak years. In 1977-78 there were 4,825 new undergraduates from developing countries, compared with 3,993 in 1980-81. The peak year for postgraduates from developing countries was in 1978-79 when there were 7,846 new entrants compared to 6,320 in 1980-81, a drop of 1,526.

The CVP points out that in making comparisons with previous years the figures do not provide a strictly accurate account of the effect of the Government's new fees policy because some students previously classified as "overseas" were paying home fees.

Nevertheless the figures still show overall trends. New undergraduates from EEC countries increased from 613 in 1979 to 760 in 1980-81, having steadily increased from 509 in 1975-76. Numbers of new undergraduates from Greece declined from 269 in 1979-80 to 169 in 1980-81. In the same years new undergraduates from the Commonwealth developed countries went from 136 to 87, and from Commonwealth developing from 3,364 to 3,134. New undergraduates from

the OPEC countries went from 440 to 543.

Numbers of new postgraduates show a decline from Greece from 1979 to 1980-81 from 566 to 427. Commonwealth developed went from 623 to 441, Commonwealth developing from 3,267 to 3,032 and OPEC from 2,032 to 1,889.

Looking at individual countries, from 1979-80 there is a drop for students from Singapore, from 320 undergraduates to 214, but an increase of postgraduates, from 125 to 131.

Zimbabwe shows a drop of undergraduates, from 143 to 47, and for postgraduates from 123 to 61. The United States shows a drop in undergraduates, from 1,155 to 1,133, and in postgraduates from 622 to 545.

Malaysia shows a fall of about 100 postgraduates, but has held steady in undergraduates.

The survey also shows very great differences in the numbers of new overseas students at different universities. Comparing this year's figures with last, Birmingham shows a fall of 36 per cent in undergraduates and 29 per cent in postgraduates.

Figures for other universities include a fall of 26 per cent and 32 per cent respectively for Essex, a fall of 72 per cent and an increase of 19 per cent for Hull, a fall of 50 per cent and 1 per cent for Lancaster, an increase of 105 per cent and a fall of 12 per cent for Liverpool, a fall of 38 per cent and 14 per cent and fall of 5 per cent for York and an increase of 54 per cent and fall of 23 per cent for Cardiff, an increase of 237 per cent and fall of 2 per cent for the University of Wales Institute of Science and Technology and a fall of 47 per cent and of 53 per cent for Glasgow.

Adult education gains little

The overall scale and cost of provision for adult education scarcely changed in the 1970s, despite the growth of student numbers, a report published this week reveals.

The report, from the Advisory Council for Adult and Continuing Education, shows that between five and six million adults took part in some sort of organized education and training each year.

The marked increase in the number of students in adult literacy schemes, Government-sponsored training programmes, trade union education and the Open University was offset by a reduction in more traditional areas following cuts in spending and fee increases in 1976.

There was also little increase in the resources allocated to the education and training of adults, the report says. Although there was an absolute rise due to inflation, funding marked only half the total spent on schools and a mere third of the spending on all forms of education and training.

"The general picture of the 1970s was of the maintenance of provision with small declines here and there being offset by correspond-

ingly small gains elsewhere", the report concludes. "In relative terms the gains were small, but where they were achieved they fortunately had a disproportionately large contribution."

The author of the report, educational economist Maurice Woodhall, says the "disturbing lack of public concern for the wide field of education and training for adults."

It is possible to identify trends in certain areas because there are detailed statistics provided for example by the university extra-mural departments, the Workers' Educational Association, local authority and adult literacy schemes.

But some Government departments have ceased to collect information on the number of workers receiving training from their employers, and there is little data.

The scope and costs of the education and training of adults in Britain: developments in the 70s by Maurice Woodhall, from the Advisory Council for Adult and Continuing Education, 19b De Montfort Street, Leicester LE1 7GE.

Vets launch appeal for £500,000

by Robin McKie

Science Correspondent

An appeal for £500,000 to fund new postgraduate courses at universities was launched this week by the Royal College of Veterinary Surgeons.

Seven specialities will be taught on one or two year courses which will be set up at certificate level for vets wishing to gain expertise in particular areas or at diploma level.

When fully established it is expected there will be about 15 places on each course. The seven subjects to be taught will be radiology, anaesthesia, ophthalmology, laboratory animal medicine, bovine reproduction, pig health and productivity

and food hygiene. Further courses, such as those on animal orthopaedics, may be added later.

College registrar Mr Alistair Porter, said the appeal for the new courses had been set up in response to public pressure for medical services for animals in line with latest developments for humans and also from vets keen to supply this service.

The basic problem was the lack of funds available at universities for training. Mr Porter added: "There is no prospect at present that there will be any money available for the establishment of new postgraduate courses and so we are setting up this self-help scheme."

He said the college would "go out to do battle" to obtain the money and the courses would become available.

The appeal is known as the centenary appeal because it is being launched 100 years after the passing of the Veterinary Act by Parliament.

Mr Porter added that the £500,000 figure named by the college was notional and would be sent a goal toward which the Veterinary Surgeons was campaigning. The Royal College of Veterinary Surgeons was established in 1844 and is the regulatory and disciplinary body for the profession. It also has a similar role to the General Medical Council for doctors.

'No plans' to end BEd

The Government has no plans to phase out the Bachelor of Education degree and make the Postgraduate Certificate of Education the main teacher training qualification, a Science official told an audience of educationists, industrialists and trade unionists this week.

Speaking at a DES regional meeting on the work of schools in Kingston, Surrey, Mr Richard Horne said that the only discussions taking place in the Advisory Committee on the Supply and Education of Teachers regarding both qualifications was over the question of balance.

Dr John Burnett said in his report to the university's general council that he was not suggesting economy measures should not be applied to education. Including the universities, "But if Scotland and the United Kingdom as a whole, is to emerge from the present recession, it would be wise for the reduction in educational spending to be planned and gradual, not haphazard and instant."

Dr Burnett said the universities could and would respond effectively to a sensibly planned programme of savings, given a reasonable time scale, but the latest wave of reductions "more by the speed with which they have to be met rather than by their magnitude, could easily have nasty responses in the universities, and in attempting to avoid short-term damage, it is too easy to lay the foundations for policies whose damaging effects would only be seen 10 years hence."

Edinburgh is to make cuts in its budget of more than £1.5m, 8 per cent over a year. And two principal departments, the department of fire safety engineering and the world famous Centre for Tropical Veterinary Medicine, are in grave danger of closure.

He expressed the hope that insurance companies might respond to a new appeal for money for the fire safety engineering department which researches the causes of fire, but added that the companies had already given considerable financial assistance.

The Centre of Tropical Veterinary Medicine is primarily funded by the Overseas Development Administration. It is endangered because ODA has withdrawn the annual £120,000 it provides for teaching costs.

The centre can survive only if it continues to attract around 50 overseas postgraduate students, who now have to pay fees ranging from £5,000 to £6,000.

At a time when resources were scarce, Dr Burnett said, he had education careful thought had to be given to reducing wasteful duplication between the public and university sectors.

Edinburgh principal calls for 'programmed' spending cuts

by Olga Wojtas

Scottish Correspondent

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SRC chairman in funding probe

by Robin McKie

Science Correspondent

Last year's funding crisis at the Science Research Council represented "a serious weakness in financial control" which was due to errors of judgement, the Comptroller and Auditor General, Sir Douglas Hensley, announced this week.

As a result of his report, which was published in the appropriation accounts of Parliament, the chairman of the SRC, Sir Geoffrey Allen, is to appear before the Public Accounts Committee to explain the funding irregularities.

The problems stem from the SRC's decision at the start of 1979-80 to re-allocate by £7m the funds that were expected to become available for its four research boards, Sir Douglas says.

"In the past, estimated rates of expenditure had tended to be particularly optimistic at the start of a programme," he adds. "Further, the provisions for research grants



Sir Geoffrey Allen: called to explain.

to universities had been underspent in the two previous years, possibly reflecting the universities' loss of confidence in their ability to main-

tain an adequate research capacity and the council wished to counter-act this."

Although the SRC later reduced its overall allocation to the boards by £1.7m, it found that by February 1980 its estimated overspending on grants and domestic expenditure was £2.2m, offset by £5.7m savings on international subscriptions.

"Thereupon, the SRC suspended the payment of some claims in February and March 1980," Sir Douglas states, although the council has to follow normal Government accounting rules which stipulate that these payments must be made before the end of each financial year. Research grant claims were not reached until late in the year, but other claims were held up.

In the event the SRC deferred until April 1980 the payment of £2m against research grants—claims to universities and of £2.1m invoices which under normal procedures would have been paid before March 31, 1980.

This contravention of normal Government accounting rules represents a serious weakness in financial control. It was due not to a weakness in procedure but to errors in judgement both in the amount of the over-allocations to the separate boards and in failing to act more rapidly to contain expenditure.

The SRC, which admitted it had erred over the issue, pointed out to Sir Douglas that Government financial procedures appeared to be ill-matched to the requirements of the support of science.

"Scientific programmes normally required sustained support over several years and sharp changes in funding were difficult to absorb," he says.

This week, an SRC official added that the Public Accounts Committee had called Sir Geoffrey Allen, as accounting officer of the SRC, to give evidence on the evidence given by Sir Douglas and was required to reserve its reply for that occasion.

Appropriation Accounts (Vol 3: classes xxv and xviii) 1979-80. H.M. £13.80.

Staffing ratios cause concern

A call has been made by the Government's chief finance investigator for a probe into the causes of high variations of staff-student ratios at universities.

This is revealed in the newly published appropriation account produced by the Comptroller and Auditor General, Sir Douglas Hensley, and cover parliamentary grants for 1979-80. He highlights subjects such as education, where variations between different universities range from ratios of 1:5.6 to 1:20, in mathematics, where staff-student ratios range from 1:5.2 to 1:16.9 and in physical sciences from 1:4.1 to 1:11.8.

"It seems to me that consideration of reasonable levels of staff-student ratios ought to be one of the important elements in the assessment of the grant needed to provide for a given number of students," Sir Douglas says. "However, there is no evidence that the concept of staff-student ratios as

such, either overall or in particular areas, plays a significant part in those determinations."

The scale of variations in staff-student ratios are so great that they require further investigation into the causes, he adds. It is important to identify abnormally high ratios not justified by academic considerations, although Sir Douglas admits this would not automatically mean they could be rectified because of staff tenure rights.

"It also seems to be that more comprehensive reviews of the current staff-student ratios for particular subjects or subject groups would enable the University Grants Committee to exercise its responsibility to assist in the planning of university development so as to encourage, during a period of level government funding, a more rational and economical distribution between individual universities of the provision needed in the university system as a whole for those subjects," says Sir Douglas.

Kinnock plans cost £2,000m

A future Labour government would have to spend at least £2,000m in two years to achieve its current educational objectives, the party's local government conference was told last weekend.

Mr Christopher Price, chairman of the Select Committee on Education, set out official party thinking on a range of issues in a speech based on remarks which were to have been made by Mr Neil Kinnock, the Shadow Secretary of State for Education. Mr Kinnock was unable to attend the Blackpool conference because of illness.

"Mr Kinnock's original draft read: 'except at the outset that the implementation of anything like the programme which I advocate will require massive additional resources—£2,000m over two years would be a starting price.'"

"But I firmly and unapologetically assert that such sums can either be spent for the positive and permanently productive investment in the capabilities and cultural development of the British people or spent aimlessly and fruitlessly as the price for depression and under-performance."

"These are not promises. But they are specific objectives which we must earnestly plan for, spend on and seek to fulfil if we are really serious about the intention to meet the educational needs of Britain," he said.

Both Mr Kinnock and Mr Price were critical of Labour's record on education and stressed that the party and the country would need to be convinced of the value of education to get resources.

"They agreed that there had been an absence of any philosophical or practical definition of what constituted a good education."

"For one thing, there has been a tremendous amount of hypocrisy about the difference between academic and vocational needs," said Mr Price. "My view has always been that the universities are a vocational ground for top people and the Manpower Services Commission has become a vocational training ground for bottom people."

MacCabe gets a fellowship

by Paul Flather

Dr Colin MacCabe, the assistant lecturer whose failure to be upgraded split the Cambridge English faculty, has been offered a one-year paid fellowship at King's College, where he is already a fellow.

As expected, the university's general board of faculties discussed the decision within the English faculty last week but made no decision.

The board has invited the English faculty to submit a full report on the state of the English faculty and on the open Senate debate on the subject earlier this month. The report will be drawn up at a faculty meeting on March 4.

King's has offered to pay Dr MacCabe a salary (£8,700) until September 1982 to ensure that the English don is "treated properly" and that the college's English teaching is not disrupted.

Dr MacCabe should have been told in March 1980 that he was not going to be upgraded to a full lecturer post. Instead he learnt the decision last December. The college

feels he should have ample time to find another job.

Members of the Social and Political Sciences (SPS) committee plan to hold a teach-in next Friday to discuss the weak and unofficial status of SPS, the divergent schools of Cambridge psychology teaching, and the case of Dr David Ingleby.

Two meetings to discuss the case of Dr Ingleby, an assistant lecturer in social psychology who has also not been upgraded, have been held at the university. The university authorities to re-open the case.

Ms Jane Selby, an SPS research student, said students wanted to be consulted on the promotion. "If Dr Ingleby is not reappointed, it will be a disaster for psychology."

Dr Ian Nichol, secretary general of the university, said Dr Ingleby had already had two reviews of his case and there was no basis for complaints that procedures used had infringed on academic justice.

Part-time deal 'threatens art'

The agreement on part-time lecturers' status could have the unexpected effect of damaging standards in art education, one of the unions which was a party to the deal agreed this week.

Mr Daniel Gleeson, general secretary of the National Society for Art Education, said he had evidence that a number of local authorities were sacking part-timers with proven expertise in art and design to offset the cost of offering associate lecturer status to other lecturers with more than 60 per cent of the full time workload.

Agreement was reached in the Barrore further education committee, on which the NSAE has one seat, to offer associate lecturer status to part-timers with a substantial workload from next September.

But Mr Gleeson warned: "Courses particularly in higher education, would not be recognized by validating bodies unless institutions have recourse to such expertise."

NSAE had recognized that generally part-timers were entitled to job security, pre-empt pay, and redundancy payments, but not by full time colleagues. But it fears that the way authorities may implement the agreement at a time of severe cut-backs in spending may damage the standard of provision, according to Mr Gleeson.

"One principal of an art college has told me his authority has already cut back on the part-time art establishment to make sure it can afford two or three associate lecturers in his discipline next September," Mr Gleeson said.

Now NSAE is likely to press for the special position of art and other special subjects such as music and drama to be taken account of as "unconventional" to implement the agreement on part-timers in full from next year.

Scots proposal to ration grants 'for second mile'

by Olga Wojtas

Scottish Correspondent

The Scottish Education Department is proposing to ration postgraduate grants for 1982-83 and to cut them back by 10 to 20 per cent next session.

In a consultative paper sent to universities, colleges and several professional associations, the SED says it should be recognized that granting postgraduate awards is very much a matter of "going the second mile".

The SED provides grants for all postgraduate courses in central institutions, colleges of education and colleges of further education, as well as postgraduate courses at Scottish universities which are not within the scope of the research councils, and courses in England and Wales designated by the Department of Education and Science.

"The conspicuous difference between the SED's scheme and the procedures followed by the other award-making bodies is that, instead of allocating a quota of awards to selected courses, we have hitherto adopted an open-ended approach, supporting any student who was accepted by the university or college concerned, and who could demonstrate that he needed to take a first degree or comparable course and a subsequent professional or vocational course in order to qualify for entry into a chosen

career", says the consultative paper.

"In practice the application of the proviso that the second course should be a normal requirement for admission to the student's chosen career has not resulted in the exclusion of any significant number of applicants."

(The SED adds that the number of awards it has made has more than doubled in the past five years, mainly because of the introduction of new courses. If other comments are to be met from the funds available for higher education, expenditure on postgraduate awards will have to be reduced, it says. Last year, almost £4m of its £110m total expenditure went on postgraduate awards.)

The introduction of quotas will lead to discussions within institutions on the distribution of awards, says the SED. "Initial factors relevant to this will be the relative success rates of students in recent years, and their performance in the employment market after graduating from assisted postgraduate courses."

However, the SED will offer provisional quotas to individual institutions for the coming session, reducing the overall number of grants by 10 to 20 per cent.

Last summer, the Scottish art colleges were disturbed to find their students had to choose between postgraduate work and teacher training as the SED had decided it would no longer give grants for both.

Anger over pay rules change

by David Jobbins

Leaders of the college lecturers' union are furious at the Government's decision to change their pay arbitration rules.

In the coming pay round the employers' and teachers' panels of the Barrore further education committee are agreed before a claim is referred. Previously either the teachers or the local authorities' representatives could take a disagreement to arbitration without the agreement of the other side. All that was necessary was to convince the independent chairman of the committee that negotiations could make no further progress.

Last year the local authorities were angered when the schoolteachers and lecturers used arbitration to secure an award better than the employers believed they could afford to pay.

Mr Carlisle's announcement that the rules were changed with effect from February 12 was made last week—exactly four weeks after he first announced consultation with the unions and local authority associations.

Lecturers are not due to open negotiations on this year's claim until next month but union leaders were quick to note a connexion with the decision on arbitration.

Dr Peter Knight, a former president of the National Association of Teachers in Further and Higher Education, said: "The Secretary of State's decision smacks of making sure the cards are stacked against teachers getting a reasonable settlement."

"It is a dirty move before the negotiations, clearly designed to assist the Government in keeping down the settlement."

Mr Carlisle protested at the time against the arbitration question, saying the general review of the Remuneration of Teachers Act also announced by Mr Carlisle. The action was also condemned by the Association of Metropolitan Authorities. Its secretary, Mr Tom Caulcott, disclosed that it had advised Mr Carlisle against it. "It will now be possible for one side to block arbitration indefinitely..."

The move was given a general welcome by the Conservative-controlled Association of County Councils, which has been training a number of changes in the pay bargaining machinery following last year's events.

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A.C.I.D. Annual Conference

Short Cycle Higher Education

Speakers: Dr. Rhodod Boyson, B. C. Stanley, Head of Education & Training—CBI. A speaker on the European Experiences. Royal Society of Arts, 16 Adams Street, London, WC2N 6AJ. 28th March, 1981, 11.00 a.m.-4.00 p.m. Cost: £20.

For further information contact:

Julie Hayward, Course Secretary, North East London Polytechnic, School for Independent Study, Millbrook Road, London E15 3EA. Tel: 01-550 7722 Ext. 3214.

The Associated Examining Board

Deputy Secretary General to the Board

Applications are invited from persons with suitable academic and administrative qualifications and experience, including work in the conduct of public examinations, for the post of Deputy Secretary General to the Board which becomes vacant on 1st August, 1981.

The salary is aligned to the salaries of senior academic University Staff, the current scale for the post being £16,410 by four annual increments of £441 to £21,733 (under review).

Further information and an application form may be obtained from the Personnel Manager, The Associated Examining Board, Wellington House, Aldershot, Hampshire GU11 1BG

Cambridge plans exam reform

by Paul Flather

Students going up to Cambridge will have to sit the university's entrance exam at the same time as taking A levels if proposals now being studied are adopted.

Senior tutors of all the colleges, members of the tutorial representatives committee, meet today to examine proposals which have been submitted in an informal discussion document.

This means that both Oxford and Cambridge are considering reforms of their admissions structures, which attract regular criticism because their entrance exams tend to discriminate against state schools.

Oxford colleges are studying plans to separate the awarding of

scholarships and exhibitions from performance in the entrance exam. Last month college representatives decided to postpone any immediate reforms.

The Cambridge plan to shift the date of the entrance exam is designed to eliminate problems colleges have in comparing candidates who take the exam after seven terms in the sixth form, with those who take it after four terms.

State schools have long complained about the problems their candidates face in preparing for a special entrance exam taken in the seventh term. Candidates are now allowed to take it after four terms, with more lenient marking and extra questions.

Dr Richard Bainbridge, chairman of the Cambridge admissions com-

mittee, said the new proposal would solve these problems and allow colleges to find the best candidate, particularly important for making awards.

At Oxford a working party suggested last year that awards, at present £60 for a scholarship and £40 for an exhibition, should be given to students on their performance once they are at university.

This proposal has met with general disapproval because awards act as a way of distributing talented students between colleges. Students must accept an award even if the college is not their first choice. An option to cut down the number of awards is now being considered.

About 35 per cent of the undergraduate intake are usually given awards.

Union push for multi-racial training

by Patricia Santinelli

Teacher education has a key role to play in countering racial discrimination, top leading lecturers' union told MPs last week.

In its written evidence to the race relations and immigration sub-committee of the Commons Home Affairs Committee, the National Association of Teachers in Further and Higher Education argues that initial and in-service teacher training courses should contain a compulsory multi-cultural element. The new FE courses should also incorporate multi-cultural studies linked to child development.

Natfhe says that colleges removed from multi-racial areas needed to explore how best they could enable their students to have direct and first-hand experience of the problems in areas with a high or medium proportion of ethnic minorities.

In addition all colleges should play their full part with teachers, professional tutors, advisors and institutes of education to develop a wide range of both full and part-time multi-cultural studies.

"Unless studies are updated to meet the emergence of a society which contains not only the seeds of racial disharmony but also the potential for immense cultural and human enrichment, they will become increasingly irrelevant and anachronistic. Far too many teachers and lecturers are under-prepared to cope with the changes needed," says the union.

Natfhe's concern is supported by recent findings by Nuffield Foundation pilot study of all secondary schools in one of the outer London boroughs which examined the participation rate in further and higher education of a sample of around 3,000 sixth and sixth formers.

A report by Professor Maurice Craft of Nottingham University School of Education and Mr Alma Craft of the Schools Council shows that among second-year sixth formers, white pupils performed at a higher level, were more likely to go on to higher education and to universities rather than polytechnics compared with their ethnic minority peers. Asians and others were more likely to remain in full-time education at the conclusion of sixth form, but at all levels of performance.



Art students from Middlesex Polytechnic at a life-drawing class. The classes at the Cat Mill site are now open to members of the public who can attend on a part-time basis.

Part-timers win maternity case

The Inner London Education Authority was wrong to deny two part-time college lecturers maternity benefits, an industrial tribunal has decided.

The two argued on separate grounds that they qualified for maternity pay because they both had two years' unbroken service with ILEA.

Mrs A. Bredanos, who worked at the Eden Grove branch of the Halloway Institute, was refused benefit because she did not meet the 16 hours per week requirement.

Mrs Rowe had contracts with the City and East London College and the South Thames College for less than 16 hours each, but the tribunal decided the hours should be "aggregated". In Mrs Bredanos' case, it was argued that her involvement in preparing prospectuses for the Institute and other duties over the sum-

mer vacation meant that she was regarded as being in continuous employment.

"In our view... it is an irresistible inference that there was an arrangement that for some purposes Mrs Bredanos was regarded as continuing in the employment of ILEA throughout the summer vacations," the tribunal said in its reserved judgment.

"It is evident that ILEA relied on Mrs Bredanos as a person available during summer arrangements to make necessary arrangements regarding students and teachers before the opening session."

The decision was welcomed by the National Association of Teachers in Further and Higher Education. It believes that the ruling on aggregation of hours scotches the notion that employers can deny legal protection to lecturers by structuring their work under two or more contracts.

ILEA is considering an appeal against the decision.

Government 'must take crucial decisions'

by Ngalo Crequr

Central government must take crucial decisions on its priorities in higher and further education and encourage teaching and research in areas of national deficiency, says MP Mr Robert Rhodes James.

In *The Cambridge Review* the Cambridge MP, who is Conservative party liaison officer for further and higher education, argues the need for a central government role and says that universities must recognize their wider responsibilities.

He says universities should beware "the currently fashionable assaults on 'useless' subjects such as history, literature, or the ancient classics, and not least because it is not the purpose of a university to produce trained technicians but to develop intellectual and personal character for a lifetime's use."

There was a danger of accepting that higher education was thoroughly desirable and important, without much thought without real awareness that there were many in commerce and industry who took a very different view.

The matter was made more complex by the problem of the very new universities, where there had been some major disappointments. "If the euphoria of the 1960s was excessive, it is undoubtedly so," then we should be careful in the 1980s not to go to the other extreme, because the real problem of the new universities is that their performance is so remarkably uneven.

There are individuals, departments and schools of a very high quality indeed; and these might well not have had their opportunities until much later in the old universities, if at all. The enlarging of the chance of a university education can only be welcomed.

But the unhappy fact in some of the new universities is that the progress and institutions of excellence are rare spires in an otherwise flat and plain.

He said this was well known and increasingly to parents, Cambridge must know it could be many years to build a college as a "startling short time" to do it.

"These fluctuations of reputation within one university, when the focus is on the wider stage of higher education, present any Government with difficult decisions."

"In one sense, there is nothing it can do about it, beyond making preferences known for government-funded research or capital projects, and it is quite reasonable to argue that this is no business of politicians or government officials."

What is the current reality? In the case is now going to be argued—or is the taxpayer to be expected to produce, without explanation, very large sums to institutions catering for a small minority, and asked to smile as it pays?" he asked.

The overlapping of functions, he said, between institutions of higher education was bewildering for the student as for the politician.

He said overseas students at universities had a potential advantage over those at technical colleges because although the Government had been able to provide a special fund for the former, it had not been able to provide similar sums to local education authorities.

The real questions were what were the various roles of the universities, the polytechnics, the Open University, the proposed Open Tech and the colleges of education.

Grant help for mid-careers

The student grant system should provide for adults on mid-career courses in universities and colleges, says the Advisory Council for Adult and Continuing Education.

Grants would act as an incentive to encourage reluctant or less able employers to continue their employees' education, it says in a response to the Government discussion paper released last October on *Post-experience vocational provision for those in employment*.

The paper unveiled new Government policies for mid-career refresher courses which would remove the financial and administrative obstacles, introduce new teaching methods, cut course planning, and promote a national information network.

Proposals for financing the courses have been widely criticised for assuming that employers, not the state, should foot the bill.

The advisory council warns that they would widen the existing divide between vocational and non-vocational provision.

"The paper's concern for qualifications and certification may not be fully shared by all employers, some of whom may regard qualifications as making their employees more mobile," it says.

Cancer aid for St Andrews

New computing facilities are to be introduced to aid Scotland's cancer research unit at St Andrews University. The workshop is one of only 24 in the world supported by the Foundation for Cancer Research, an American charity.

The research workshop's aim is to understand the nature of cancer by investigating the fundamental structure of normal and cancer cells by methods which are relatively new to biology.

Dr Colin Thomson, director of St Andrews' research workshop, said examination of the molecular structure of the cancerous cells would just become possible with the aid of the new computing facilities.

The computing facilities will be used in research for drugs to treat cancer.

"We already have anti-cancer drugs which kill tumours," said Dr Thomson. "The trouble is that they are not selective and that the normal cells are killed as well as the cancerous cells. What we are trying to do is develop anti-cancer drugs in which a molecule can be connected to a cancerous cell to reach the tumour cells without damaging normal cells."

Managers analyse their success

Management education should be a continuing process rather than a short sharp injection of knowledge and skill. That is the conclusion of a study produced by Professor Charles Margerison of Cranfield Institute of Technology, following his survey of the careers and training of more than 250 chief executives of leading companies.

The study carried out by Professor Margerison of the Institute's school of management, covers executives of firms taken from *The Times* Top 1,000 list of companies and analysed their views of their own success.

Among the qualities the executives considered most important were:

- An ability to work with a wide variety of people
- Early overall responsibility for important tasks
- The need to achieve results
- Leadership experience early in career, preferably before 30.

Working class student 'dearth'

The declining proportion of working class students from working class homes is worrying the Government. In 14 provinces the Government for Higher Education, admitted the week.

Speaking at the Young Conservatives' conference at Eastbourne, Mr. Boyson contrasted the fall from 10 per cent to 23 per cent of working class children going on to university in Britain with the rise to 33 per cent in Sweden, which stands at 33 per cent.

"The Conservative Party is always prepared to face facts and reality," he told the conference. "These figures of the stark picture of obtaining good educational results and the falling percentage of university students from the children of working class parents entering university, however, the mix of grants and loans still varies very much from

North American News

Security agency checks codes

by Clive Cookson

WASHINGTON University Scientists working in the fast-growing field of cryptography will send their papers for review to the top secret National Security Agency (NSA), under a voluntary system recommended by a panel of academics established by the American Council on Education (ACE).

The NSA asked the ACE to set up the panel, which is known as the public cryptography study group, because it was becoming very worried about the rapid advance of academic cryptography—the study of codes—since computer scientists began to take an interest in the field about five years ago. Until then it had been almost exclusively the preserve of military and intelligence agencies and particularly of the NSA, the arm of the defence department responsible for monitoring worldwide communications for the United States government.

The NSA believes unrestricted publication of information about making and breaking codes could affect American security.

The study group's proposal adopted by a vote of eight to one, is the first case in recent memory in which an academic panel has recommended prior restraint on the publication of university research. But the recommendation was made in order to head off the possibility that the government might otherwise introduce legislation to block the publication of certain cryptographic research. All members of

the panel opposed legislative restraints.

Under the voluntary plan, researchers will submit papers on cryptography to the NSA before publication. If the agency believes a paper or part of it might threaten national security, it will ask the author to leave out or amend the offending sections.

Researchers will be able to appeal adverse decisions to a five-member review board, three of whose members would be nominated by the president of the National Academy of Sciences. The other two members would be appointed by the director of the NSA. However, because the system would be voluntary, a researcher could reject the advice of the NSA and the review board, and go ahead and publish anyway.

The only member of the study group who voted against the proposed system was George David of the Georgia Institute of Technology. His minority statement spoke bitterly of the "NSA's effort to control cryptography" as "unnecessary, divisive, wasteful and chilling."

Dr David, who has been fighting the NSA since it got the patent office to slap a temporary secrecy order on a cryptographic device he invented in 1978, said only two members of the panel really understood cryptography and its importance. He maintains that the public interest in free academic research in cryptography—leading to secure

codes to protect information transmitted across the world or stored in a computer—far outweighs any inconvenience to the NSA.

Several academic spokesmen who did not serve on the panel were disturbed by its recommendations because they represented a dangerous precedent for scientific research in other fields.

"What about laser work, robotics, high-speed integration—areas that might have military application?" Asked one. "This whole concept of secrecy and control is antithetical to the intellectual atmosphere, the traditions, the values of a university."

However, the eight academics and university administrators who supported the plan were prepared to defend it, at least as an experiment. "The NSA has recently been more open than in the past. I would like to encourage this openness and I think we have to meet the agency half way," said Martin Hellman of Stanford University, the second member of the group who is closely involved in cryptographic research.

Michael Hayman, chancellor of the University of California at Berkeley and co-chairman of the group, said: "The NSA indicated it had a real problem, and our effort was to work out a system to test whether or not it does have a problem. Our feeling was to say, 'let's give it a chance'."

The recommendations now go to the ACE, the country's largest association of colleges and universities.

Task force defends grants status quo

by our North American editor

Canada's student grant and loan programmes are in good overall shape and "largely meet the objective of allowing financially needy students to participate in post-secondary education without undue hardship".

That conclusion by the Federal and provincial governments' joint task force on student assistance angered the country's student leaders who had been hoping that the review would recommend a complete overhaul of the present system.

"We are not going to see major changes in student aid in Canada on the basis of this report," said Jeff Parr of the National Union of Students. "It just suggests minor changes and is basically a defence of the status quo."

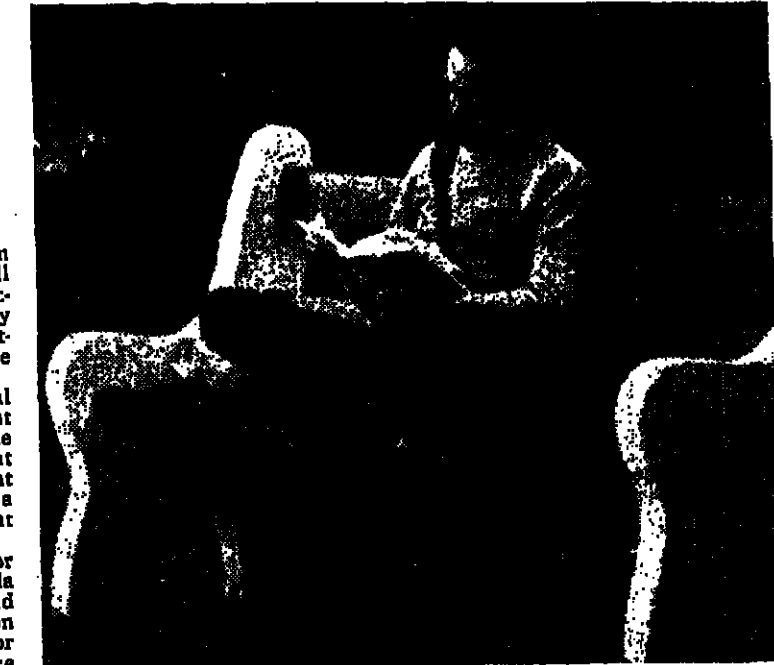
In fact the task force, which is composed mainly of senior civil servants from the provincial ministries of education and from the federal Department of the Secretary of State, presented the government with a series of five alternatives for the future development of student financial aid in Canada.

Three of the options are essentially refinements of the existing system, but the remaining two are quite different. One, the income contingent repayment plan, is based on a submission to the task force by the Association of Universities and Colleges of Canada (AUCC), and the other, the all-grant plan, is adapted from a proposal by the National Union of Students.

Student groups and the public have until June to send the task force comments on its report. During the summer the committees will meet again to prepare a final draft, whose recommendations would be implemented by legislation in 1982 or 1983.

At present Canada has 12 different student aid schemes, one in each province. In 14 provinces the package includes a mixture of the federal government's Canada Student Loans Programme (CSLP) with whatever loan and grant programmes the provincial government provides. The twelfth, Quebec, has opted out of the CSLP and just administers its own grants and loans.

Although the 12 student aid packages are run independently by the provinces, they do maintain some administrative coordination through a federal-provincial body called the CSLP Plenary Group, which tries to standardize eligibility criteria. However, the mix of grants and loans still varies very much from



A peaceful hour in the busy life of a working student.

place to place, and the maximum financial aid ranges from \$2,800 in impoverished Prince Edward Island to \$12,800 in oil-rich Alberta.

The second option, the so-called loan-first plan, would provide more uniformity. Students would receive an amount of aid that depended only on their financial need and would not vary with their province of residence. The first part of the need would be met by a loan, and a grant would make up the remainder for the poorest students.

The third alternative is the same as the loan-first plan, except that students would get more money in the form of grants in their early years of postsecondary education, and more in loans in later years.

Under the income contingent repayment plan, the fourth option, students would be able to repay part or all of their financial aid after graduation. Repayment would be linked to earnings and made through an income tax surcharge.

Finally there is the NUS proposal for an all-grant system. The report points out the advantages of similar policies and attractiveness to potential students who would not have to worry about going into debt and also its great disadvantage: expense. The task force estimates that an all-grant programme with mandatory parental contributions would

cost \$69m in 1981-82, or 75 per cent more than the continuation plan. If parents did not have to contribute and all students were treated as self-supporting, as the NUS suggested, the cost could reach \$1,000m.

Catholic bishops move to assert religious identity

The 240 Roman Catholic colleges and universities in the United States make up the world's largest group of Catholic institutions of higher education, and with a combined enrolment of 535,000 students, they are an important sector of American higher education.

Over the last two decades many Catholic institutions have fudged their religious identities under pressure from the modern secular world, and some have little more than their formal affiliation with the church left to distinguish them from other independent colleges and universities.

Now, however, the Catholic bishops of the United States have issued their first pastoral letter about Catholic higher education. It urges colleges and universities "to manifest with unmistakable clarity their Catholic identity and mission."

Without explicitly criticizing institutions for their lapses into secularism, the bishops tell them that their Catholic identity "should be evident to faculty, students and the general public. Policies, practices, programmes and the general spirit should communicate to everyone that the institution is a community of faith, dedicated to the ideals and values of Catholic higher education."

The Rev William Revak, president of the University of Santa Clara (California), said he thought the bishops were speaking out now because "Catholic higher education in America is at a crossroads, and it needs assurance that its cause is still viable and that its motivation is still honourable. It needs encouragement and support from its leaders."

The pastoral letter, a product of three years' work by a committee of university and church leaders, not only reminds Catholic academe of its religious obligations but also appeals to Catholics outside higher education to "see generous and long-term support of Catholic institutions as one of the top priorities in our church."

Father Revak believes that is a particularly important request because an increasing number of Catholics are asking whether their huge investment of financial resources and human effort in colleges and universities is justified. As the supply of religious men and women declines, more Catholic

orders are wondering whether they can spare people to work in higher education.

That is certainly true of his own order, the Society of Jesus, said. The Society of Jesus has a particularly distinguished history of involvement in American higher education, where it maintains 28 colleges and universities. Yet many younger Jesuits look at the world around them and doubt whether all that investment has produced a worthwhile return, he said. They are more attracted by the idea of doing direct social work, of ministering to those caught in poverty and injustice rather than teaching the offspring of the American middle class.

The bishops do not have much to say about higher learning and scholarship itself, apart from the interesting assertion that "the Catholic identity of a college or university is effectively manifested only in a context of academic excellence," and an acknowledgement of the important place of the intellect within the Catholic faith.

According to Dr Revak, that is needed to counter the "secularist" and "anti-intellectual" evangelism current in American religious thought; what has learning to do with being a follower of Jesus Christ?

The essence of the letter lies in its statements about the pastoral role of a Catholic university. That depends on "the recruitment and retention of committed and competent Catholic faculty."

The bishops have seen too many examples of institutions where, as they put it, the campus ministry "is regarded only as something like a bookstore or student union, some sort of a convenience for those students who want a little religion on the side of their higher education."

But, perhaps even more than the campus ministry, the bishops express concern for the place of theology in the scholarly pursuit of theological learning—in Catholic academic life.

"The distinguishing mark of every Catholic college and university," they say, "is that in an appropriate fashion, it offers its students an introduction to the riches and values of the Catholic theological heritage. This is a moral obligation owed to students."

Faculties strain under unionization

Academic unionization makes relations between faculty members and administrators more formal and more adversarial, according to a study by the American Association of State Colleges and Universities (AASCU) of 12 campuses in Minnesota, Illinois, New York and Florida.

The survey discovered too that collective bargaining shifts the decision-making process from academic departments to the central campus administration.

"Also, respondents in substantial numbers agree that bargaining caused a deterioration in the sense of campus community and a decline in the role played by faculty governance in decision making," according to the AASCU report.

But academics said they benefited from unionization by getting better information on important university issues and more discussion of them. They felt it brought a moderate increase in salaries and in time spent on meetings.

ANNOUNCEMENTS

US-UK INSTITUTIONAL LINKS

US International Communications Agency and the Central Bureau for Educational Visits and Exchanges

Applications for small grants in support visits to the US are invited from teachers, lecturers and other college of higher education who have established links with US institutions.

Grants will be awarded to support exchange of faculty, students, administrative staff, educational materials and equipment.

Further details and application forms (which should be returned by 15 April) can be found in *Supplement* 1981, p. 18. May for 1982 may be obtained from:

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captive Hamlet of Europe

The author is professor of education at the University of Exeter.

BOOKS

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BOOKS

Vignettes

Literature and Society in Germany 1918-1945
by Ronald Taylor
Harvester Press, £22.00
ISBN 0 85527 898 6

Professor Taylor points out that in a period such as the one covered by this book, from the end of the First World War to the German collapse in 1945, the "interplay between literature and society needs no labelling". This is undoubtedly true, and his study illustrates it very well. A more traumatic course of events within three and a half decades could hardly be imagined.

Yet literature and the arts flourished exceedingly. From a cultural point of view this was a period uncommonly rich in promise and achievement, a fact still reflected in the cliché about the "golden twenties". Crisis and upheaval clearly did not impede cultural advance. Rather, they helped to activate and release cultural energy and to generate that enormous diversity of artistic enterprise which Professor Taylor's book so clearly reveals within Germany itself up to 1933 and thereafter in the case of writers who went to live elsewhere.

Inevitably in the circumstances therefore social and political problems dominated a good deal of the literature, implicitly or overtly. Many works, especially the weaker, were about little else. So the "and society" dimension of any analysis of this literature would have been to the fore even if Professor Taylor had not chosen to feature it in his title. Having done so however, he happily did not fall victim to the danger of treating literature merely as social comment or of selecting for special attention only works and writers having a more direct social preoccupation than others. Kafka, for example, does not come off less well than Hans Fallada.

The book is in two parts. The first, essentially about Expressionism and its aftermath, goes to 1933. The second extends to 1945, with the literature of National Socialism as its main concern, and concluding with a discussion of writers like Brecht and Thomas Mann, who went into exile. To set the scene, each part is prefaced with a very useful introductory chapter about the social and political situation, sketching the main events. There follows in each case a discussion of writers and their works "by theme and by genre". Some writers, as Professor Taylor puts it, are "present ex officio"—Kafka, Brecht, Thomas Mann, Stefan George, Döblin, Ernst Jünger. In other cases he says there was a problem of whom to include and whom to omit. This being so, it is to his credit that he managed to say so much and with such elegant economy about so many lesser known writers and forgotten figures. The outcome is a series of consistently excellent vignettes of writers, major and minor, whom Professor Taylor discusses with dexterity, and a nicely ironic touch.

This is essentially literary history, and as such of real quality. If, however, it brings together literature and society, this does not make it—in case the title led one to expect this—a sociology of literature. It is one thing, for example, to describe the social and political themes in Expressionism. It would have been another to explore more specifically what it was about the society that produced that phenomenon in the first place. It might be said that Professor Taylor should have gone further and more, probing in a sociological direction. However, this does not detract from the many and varied merits of his book which is among those to which I would first direct my students' attention. An excellent and wide-ranging bibliography adds to its attractions.

R. Hinton Thomas

R. Hinton Thomas was until recently professor of German studies at the University of Warwick.

The second edition of Richard Wollheim's *Art and its Objects* (Cambridge University Press) reviewed in *THE TIMES* February 18, is not available in paperback as yet.

The struggle between reason and feeling

Sex and Sensibility: Ideal and erotic love from Milton to Mozart
by Jean H. Hagstrum
University of Chicago Press, £18.00
ISBN 0 226 31289 5

Sex. The words change; the attitudes to women change; the ideas of home and family change. How men and women look at each other; what they do to one with each other; what each thinks the other is for—all change. Such changes cannot be explained simply as functions of changes in economic systems, any more than they can be explained by such things as the invention of the corridor or the private bedroom (though such architectural developments had an enormous impact on notions of privacy and sexuality). Jean Hagstrum thinks too little critical commentary has addressed itself to the unifying mystery as to how the vast amount of literature and art—connected with love. The task to which he has applied himself is to describe how changes in the image of woman, of the family, in ideas about love, were expressed in the literature (and more briefly in the painting and music) of the period.

One opening slight reservation I have about this very learned book is that for anything resembling explanation Hagstrum relies entirely on Lawrence Stone's *The Family, Sex and Marriage in England 1500-1800* with its basic ideas concerning the development of "affective individualism" and a new mentality which produced a different organization of the family. He sets out to study "sex and sensibility at their intersection" and is concerned with love as a reality as perceived and represented during the period, from the most ideal to the most erotic love. That he is dealing with a distinct period Hagstrum clearly believes, since the unique combination of sex and sensibility which he seeks to trace and describe gives way—as he sees it—to the very different notions of Romanticism and romantic love. One signal mark of his period is the transformation and secular displacement of "that virtuous and virtuous" which pervaded many values and concerns, including "love", so that, for example, we find "the complex coexistence in eighteenth-century *amour-tendresse* of Christianity and secular modernity". That "secular displacement of values" has, arguably, been continuing ever since.

The words change their meanings. "Pathetic", once associated with "violent, disruptive and erotic passion" in this period moved toward implications of delicacy and softness. "Sentiment" began as a word "that expressed, primarily a judgment of the mind, and then became one that involved a kaleidoscope of free-flowing, uncontrolled feeling". "Sense", and "sensibility" are associated by their common derivation from *sensire*, but the meanings

flow in all directions, so that "sense" could equate roughly with our "good sense", but could also be used to signify "erotic fire" (for example, in Congreve, or as applied to Richardson's *Lovelace*). And "sensibility" could relate to "a fine excess or deplorable excess", yet by the end of the eighteenth century it became "almost indistinguishable" from "sentimental". In summarizing, Hagstrum notes that the three most characteristic words for the emotions came "to refer to the gentle, tender, loyal, courteous emotions, precisely those most amenable to domestic needs and desires". All this is admirably demonstrated, but to "explain" such a sexual-semantic shift by referring vaguely to "an understandable drive toward civilizing gentleness in a culture tired of the aggressive emotions provoked by civil war and religious fanaticism" is not, really, to explain very much.

Hagstrum knows very well that one of the most difficult tasks in any enterprise of this kind is that of "beginnings". But he does well to start with Milton and the fusion of "sex and sensibility" which suffuses his account of Adam and Eve's relationship and which, as Hagstrum amply documents, influenced many later writers. Hagstrum makes telling use of Milton's prose tracts, particularly *The Doctrine and Discipline of Divorce*. To take one of his summarizing points, Milton brought to fruition what was only latent in Judaism and Christianity, "an exalted love between the sexes".

That love, which Milton defined as mutual and as embracing both the spiritual and the physical, he made the very cornerstone of the institution of marriage, which was before and since able to exist and even thrive without it. At the same time, Milton recognized that an institution based upon human compatibility and mutuality in passion must be sensitive to personal change and also flexible enough in its arrangements to make accommodations when its chief ends were abrogated. He was therefore led to advocate one of the earliest and boldest positions in all of Christian history, the free and simple dissolution of the marriage bond when its essence, friendship between man and woman, had disappeared.

Milton here, as it were, put his finger on all the problems. How can society institutionalize passion? Can spiritual and physical love and friendship be bound together in any stable relationship? Can society afford an "institution" to be as flexible, not to say as changeable, as men and women and their feelings? And so on. It is not a comment on Milton's genius but rather on the impossibility of his hopes, that subsequent literature hardly, at all, celebrated his "ideal" relationship between man and woman, but showed rather how the various



John Dryden, "the father of English sensibility".

feelings and emotions fall apart into separation. *Idem* conducts us through some of the lesser known literary areas of sex and sensibility of the period. There are some interesting readings of some of Dryden's plays—Dryden being "of the highest importance because he embodied both sex and sensibility"—indeed "may be called the father of English sensibility". For Dryden (unlike Milton) love was not "hierarchical" but rather "an energy within experience" and Hagstrum demonstrates how he "created within a belligerent heroic world characters moved by delicate love, tender pity, and soft compassion". The traditional notion of the "heroic" undergirds a crucial metamorphosis, and Dryden's version of love was "both ideal and erotic". Writing about Restoration love in general Hagstrum notes that "the filiole in love was an object of central authorial concern".

He then examines the representation of four "abandoned and passionate" women—Dido, the Portuguese Nun, Calista (in Rowe's *Fair Penitent*) and Eloise (Pope). What these women have in common is sexual passion and the kind of obsessive devotion which was required not of mistresses but of the work—namely (if simply) that the elly, or perversely, the interest aroused by these women was the spectacle they offered of an extramarital, passionate energy which would "in some way have to fuel the domestic exasperation as it was being reconceived". There was a discernible emergence of "new women"—"learned, literate, cultivated, sometimes rebellious"—and sympathies were being torn and redistributed accordingly. In Defoe's succinct formulation: "All the world are mistaken in their practice about women".

Sections follow on Pope's women, Swift's Vanessa and Stella, Richard

Steele (whose letters exalting married love Coleridge also referred to), and Fielding's *Amelia*. Hagstrum sees as something of a pioneer work "since marriage initiates the action instead of concluding it", though if it does conclude it "divinely sanctioned institution" of marriage there is an old shadow of adultery cast across it. On Richardson's works Hagstrum seems to me weak. *Lovelsa* is, for example, "a brave, attractive, and dashing rake" who has "enormous potential as a husband and father of a family". Well, perhaps, in that is not the novel Richardson wrote. And in his admiration for *Sir Charles Grandison*, Hagstrum finds a fine vision of "morning and daily life, perhaps (according to your class and wealth): but 'normality', or 'taint' not. But then Hagstrum is a harsh critic. He finds *Pamela*, for instance, an "unforgettable and lively novel". A less "lively" novel than volume two of *Pamela* it would be hard to find (apart from *Sir Charles Grandison*). Again, when Hagstrum writes about Rousseau, I find much to disagree with (referring to *La Nouvelle Héloïse* he maintains, wrongly, that the love of Julie and Saint-Preux triumphantly embodies the qualities of romantic love"), though he is right to see that novel as attempting to bring together three kinds of love, "the uxorial, the homoerotic, the heterosexual". What he fails to emphasize is how utterly and disastrously that attempt fails.

A final chapter glances at "the aftermath of sensibility" in Stowe, Goethe, and Jane Austen, in which platitudes and suggestive insights mix together ("evidence shows that late eighteenth-century sensibility found incest and premarital cohabitation congenial"; there is an obscure allusion to be followed up), and an epilogue, aptly enough, looks at *Les Liaisons Dangereuses*. "Here, in a true confrontation of old and new sensibility, sex seems at first to win." But in the end it is the mental and spiritual love which triumphs, even in—particularly in—death. "Both sides fall; but it, for all its brilliance, refuses its hatred and recrimination, at civil war with itself, while sentiment goes to its grave in spiritual triumph." This is really the conclusion of Hagstrum's fascinating work—namely (if simply) that the period witnessed a debate, or a struggle, between reason and feeling; finally, the lesson seems to be that "feeling, guided by values, is capable of achieving love". For more basic and pertinent yet definite conclusion is that "the deepest if not the most attractive legacy of the Age of Reason is the capacity for sensibility". It is a conclusion which could lead to many fruitful debates.

Tony Tanner

Tony Tanner is a fellow of King's College, Cambridge.

Chekhov without his Russian context

Chekhov: the critical heritage
edited by Victor Emelianov
Routledge & Kegan Paul, £17.50
ISBN 0 7100 0374 9

Three quarters of the items collected in this volume are press notices of more than 40 productions of Chekhov's major plays on the English and American stages; the earliest to figure is a version of *The Seagull* at the Royal Theatre, Glasgow, in November 1903, and the latest the Old Vic's *Uncle Vanya* of January 1945. The editor has gathered a lot of material—an appendix of 19 press notices—and although individually some of the notices are of only ephemeral interest, taken together they successfully reflect Chekhov's steadily growing popularity in the English-speaking theatre up to the end of the Second World War. They also provide a wide range of insights into both the atmosphere and the mechanics of Chekhovian drama, which will doubtless be of practical help to modern producers and actors.

So far, as good, it is a pity that Dr Emelianov, who is a lecturer in drama at the University of New

South Wales, should devote much more attention to Chekhov's plays than to his stories, but this imbalance alone would not seriously devalue the book. It does after all include a number of engaging pieces by early English admirers of Chekhov's prose, such as Arnold Bennett, John Galsworthy, R. M. Fox, and even John Middleton Murry, even if he omits Virginia Woolf (who appears only in a footnote). H. E. Bates and Katherine Mansfield. And I was certainly inclined to read items like E. J. Milne's early assessment of Chekhov, written in 1931. *The Times* obituary notice of 1954, and A. R. Keston's "obituary" in 1961. "Disappointment, indeed, haunted with every species of weird hallucination, hysterical, morbid, and generally depraved woman. These are Chekhov's favourite subjects."

No, the real trouble with this book is that it almost totally disregards the Russian background. This would be unfortunate in any discussion of Chekhov, but in a book claiming to examine his critical heritage such a stance is little less than perverse. The editor ignores the extensive body of valuable and entertaining Chekhov criticism which arises only

in Russian and on top of that fails to include extracts from most of the Russian critical works which were published in English translation during the period of his survey. Works like Kropotkin's *Russian Literature: Ideals and Realities*, Shestov's famous essay, *Creation out of the Void*, Gorky's reminiscences of Chekhov and, most surprisingly of all in view of his preference for the drama, Stanislavsky's *My Life in Art*.

This absence of native Russian responses (except for a somewhat academic contribution by Mirsky) means that we get no serious evaluations of Chekhov's place in nineteenth-century Russian literature; there is almost no mention of his attitudes with Pushkin, his reaction against the weighty soul-searching of Tolstoy and Dostoevsky, or his theatrical debt to Turgenyev and Ostrovsky.

We have next to nothing about the state of Russian drama in the late nineteenth century, or about the influence exercised by the Moscow Arts Theatre on Russian playwrights in general and on Chekhov in particular. Nor do we find any serious or stimulating criticism or anything about Chekhov's changing

critical fortunes in his homeland. The editor could well have looked on some of these matters in his introduction; but the only time he ventures onto Russian territory is in his opening paragraph, which is not only very sketchy, but also contains the careless assertion that Dostoevsky was living in exile in Siberia in 1890—40 more than 30 years after the event, and indeed nearly 10 years after the novelist's death.

A further sad result of Dr Emelianov's omission of Russian criticism is that Chekhov himself remains a very pale figure, rather than emerging as that rounded human being with a winning sense of humour whose presence is so strongly felt in many of his critical works produced by his fellow countrymen.

Chekhov is the second Russian writer to appear in the *Critical Heritage* series, but I fear this book falls far short of the standard set by its precursor, A. V. Knowlton's *Tolstoy*.

D. J. Richards

D. J. Richards is head of the Department of Russian at the University of Exeter.

THE TIMES Higher Education SUPPLEMENT

ACADEMIC PUBLISHERS SPRING BOOK OFFER

In the following pages of the THES a number of academic book publishers have listed titles — the prices of which have been reduced for a limited period.

On page 15 there is a list of college and university booksellers where these books are obtainable either from stock or by special order subject to their availability from the publisher. Books may also be ordered by post using the BASH order form which appears on page II.

A similar offer, but showing many different titles, can be found in today's issue of the TLS.

ACADEMIC PUBLISHERS SPRING BOOK OFFER

BIOCHEMISTRY continued

MM98: ESSAYS IN NEUROCHEMISTRY AND NEUROPHARMACOLOGY. M. B. H. Youdim. Wiley. £12.10 at £8.50. Volume 3, 1978, 240 pages.

MM15: MICROBIAL TRANSFORMATIONS OF NON-STEROID CYCLIC COMPOUNDS. K. Kisch. Wiley. £72.45 at £15.50. 1976. 1,284 pages. Reviews the literature on the subject of carrying out transformations of non-steroid compounds by means of microbial enzymes.

MM16: CYCLIC 3' 5'-NUCLEOTIDES: Mechanisms of Action. H. Cramer. Wiley. £22.15 at £14.50.

1977. 568 pages. Surveys cyclic nucleotide research and the impact of cyclic nucleotides on normal and pathological physiological regulation in organs and states.

MM17: CONCANAVALIN A AS A TOOL. H. Bittiger. Wiley. £28.50 at £18.50. 1976. 656 pages. Aimed at laboratory investigators, this describes in detail current biochemical, biological and microscopical methods of employing Con A as a tool.

MM99: THE ENZYMES OF BIOLOGICAL MEMBRANES. A. N. Martonosi. Wiley. £17.25 at £9.50. 1976. Volume 1: Physical and Chemical techniques. 272pp.

MM100: THE ENZYMES OF BIOLOGICAL MEMBRANES. A. N. Martonosi. Wiley. £40.25 at £22. 1976. Volume 2: Biosynthesis of Cell Components. 672pp.

MM101: THE ENZYMES OF BIOLOGICAL MEMBRANES. A. N. Martonosi. Wiley. £31.65 at £17.50. 1976. Volume 3: Membrane Transport. 476pp.

MM102: THE ENZYMES OF BIOLOGICAL MEMBRANES. A. N. Martonosi. Wiley. £31.65 at £17.50. 1976. Volume 4: Electron Transport Systems and Receptors. 488pp.

BIOLOGICAL SCIENCES

J31: SPECIFICITY OF EMBRYOLOGICAL INTERACTIONS. Ed. D. R. Garrod. Chapman & Hall. £18 at £10.75. A collection of articles on recognition between cells during morphogenesis of interest to workers in embryology, neurobiology and cell biology.

J30: STRUCTURE AND FUNCTION OF PROTEOLIPIDS IN THE VERTEBRATES. Ed. P. J. Mill. Chapman & Hall. £26.75 at £17.25. Reviews mechanism of posture and movement control in invertebrates for senior undergraduates and postgraduates in neurobiology and sensory physiology.

J29: SYNAPSES AND SYNAPTOSOMES. D. G. Jones. Chapman & Hall. £25 at £15. Emphasis on morphological aspects of synapses with over 100 micrographs. Useful reference source for all workers in neurobiology.

J28: TAXIS AND BEHAVIOUR. Ed. G. L. Hazelbauer. Chapman & Hall. £20 at £12. Range of contributions on cell movement in response to environmental change for researchers in microbiology, cell biology, biochemistry and pharmacology.

J27: ACETYLCHOLINE SYNTHESIS IN NEURONS. G. Turek. Chapman & Hall. £17.50 at £10.50. First comprehensive review of subject with over 1,000 references, many summarised in tables, for researchers in biochemistry and physiology.

J26: BIOCHEMICAL ANALYSIS OF MEMBRANES. Ed. A. N. Maddy. Chapman & Hall. £24 at £16.50. Describes practical methods on membrane isolation and analysis with enough theory to enable researchers to modify techniques for their own use.

J25: CELL BIOLOGY OF BRAIN. W. S. Hoar. Chapman & Hall. £20 at £12. An important source which correlates brain structure with function for senior undergraduates and postgraduate students of neurobiology.

J24: COMPARATIVE ENDOCRINOLOGY OF PROLACTIN. D. M. Ensor. Chapman & Hall. £20 at £12. Detailed account of evolution and physiology of this hormone in vertebrates for students and researchers in biology and medicine.

J23: THE EEL. F. W. Tesch. Chapman & Hall. £22.50 at £13.50. Covers all aspects of eel biology and management. A detailed reference source for fishery biologists, zoology and physiology students.

J22: ELECTRON PROBE MICROANALYSIS IN BIOLOGY. Ed. D. A. Erasmus. Chapman & Hall. £17.50 at £10.50. An extensively illustrated introduction to this X-ray technique for electron microscopists and students of medicine and biology.

J21: THE PHYSICAL BIOLOGY OF PLANT CELL WALLS. R. D. Preston. Chapman & Hall. £21.50 at £12.95. Cell wall structure and biosynthesis in algae and higher plants. Academic and industrial researchers in plant science, biochemistry and biophysics.

J20: THE PERIPHERAL NERVE. Ed. D. N. Landon. Chapman & Hall. £35 at £19.50. Concise survey of structure, function and pathology of mammalian peripheral nervous system for students and postgraduates in biology and medicine.

J19: OCTOPUS. M. J. Wells. Chapman & Hall. £20 at £12. A detailed, highly illustrated account of Octopus physiology and behaviour for students and researchers in zoology, physiology and neurobiology.

J18: MICROBIAL INTERACTIONS. Ed. J. L. Reissig. Chapman & Hall. £25 at £15. Deals with communication between algae, bacterial and fungal cells through nine microbial case histories. For biochemists and microbiologists.

J17: INTERCELLULAR JUNCTIONS AND SYNAPSES. Eds. J. Feldman and J. D. Pita. Chapman & Hall. £18.50 at £11. The first review of intercellular contact to include both junctions and synapses. For cell and developmental biologists and biochemists.

J16: CENTRIFUGAL SEPARATIONS IN MOLECULAR AND CELL BIOLOGY. G. D. Brine and D. Rickwood. Butterworths. £16 at £12. Each chapter contains a detailed description of a different aspect of centrifugation, individually written by authorities in the field.

J15: GROWTH WITHOUT ECODISASTERS? Professor Nicholas Polunin. Macmillan Publishers. £22.50 at £13.50. In this book, leading environmentalists attempt to force awareness of the vital need for concerted action if both man's life and nature are to survive.

J14: ON HUMAN NATURE. Edward O. Wilson. Harvard University Press. £7.85 at £5.80. Shows sociobiological theory as compatible with a broadly humane and egalitarian outlook with diversity to be treasured, not merely tolerated.

J13: SOURCE BOOK ON THE ENVIRONMENT: A Guide to Literature. Kenneth A. Hammond, George Macdonald, and Wilton B. Fairchild (Editors). University of Chicago Press. £15.75 at £11.50. 1978. 26 contributors examine major elements of the environment and selected case studies of human alteration.

J12: INTERNATIONAL RESEARCH IN NUTRITION. B. Rolander-Chile (Editor). Pergamon Press. £22.25 at £8. 136pp. Hardcover. The book provides a complete outline of global research in nutrition.

J11: MARIJUANA: Biological Effects. G. Nahas and W. Fato (Editors). Pergamon Press. £42 at £25. 777pp. Hardcover. A comprehensive review of the effects of cannabinoids on cellular metabolism, reproduction, and brain function.

J10: REFLECTIONS ON BIOCHEMISTRY. A. Katchalsky, R. Horvick, M. Corradiello, and J. Ode (Editors). Pergamon Press. £50 at £28. 480pp. Hardcover. Covers many of the major advances in biochemistry during the past 50 years. Authors include ten Nobel Prize winners.

J04: THE ECOLOGY & CONSERVATION OF LARGE AFRICAN MAMMALS. S. K. Eklringham. Macmillan Publishers. £15 at £9. Amongst the topics covered are social behaviour, population biology, feeding in an ecological framework, conservation, wildlife management and man and national parks.

J05: TOPICS IN PLANT POPULATION BIOLOGY. O. T. Solbrig. Macmillan Publishers. £14 at £9. The articles in this book synthesise information from genetics, ecology and physiology to facilitate understanding of the growth cycle of plants.

HH14: MICROTUBULES. K. Roberts and J. S. Hyams (Editors). Academic Press. £37.40 at £28. This book concentrates on those areas of research which are exciting now and will lead to future advances and developments.

HH15: INTRODUCTION TO ECOLOGICAL BIOCHEMISTRY. J. B. Harborne. Academic Press. £8.20 at £6. This unique textbook provides a synthesis of information previously obtainable only from scattered sources.

MM82: BIOLOGICAL DETERMINANTS OF SEXUAL BEHAVIOUR. J. B. Hutchison. Wiley. £32.20 at £21. 1978. 840 pages. Questions concerning the role of hormones in sexual behaviour are considered in the light of behavioural studies.

MM83: EPIGENETICS. S. Lovtrup. Wiley. £27.55 at £18. "Most interesting... brings together for the first time data on epigenetics from a wide range of specialist fields."—New Scientist.

MM84: WHITEFLY OF THE WORLD. L. A. Mound. Wiley. £14.40 at £9.50. 1978. 348 pages. Provides taxonomic data for every described species, and all available records of their host plants, parasites, predators, and geographical distribution.

MM78: BIOLOGICAL NITROGEN FIXATION IN FARMING SYSTEMS OF THE TROPICS. A. Ayanaba. Wiley. £21.70 at £12. 1977. 392 pages. Based on a Symposium held at the International Institute of Tropical Agriculture, in Ibadan, Nigeria, in October, 1975.

MM79: RESISTANCE OF PSEUDOMONAS AERUGINOSA. M. R. W. Brown. Wiley. £21.85 at £14. 1975. 346 pages. Summarises our present understanding of the mechanisms by which *Pseudomonas aeruginosa* resists the actions of many chemical antimicrobial agents.

MM80: BIOLOGICALLY ACTIVE SUBSTANCES: Exploration and Exploitation. D. A. Home. Wiley. £17.80 at £6.50. 1977. 388 pages. This volume presents a brief survey of the many-faceted scientific career of Sir Ernst Chain.

MM81: INTRODUCTION TO BIOLOGICAL PHYSICS. M. E. J. Holwell. Wiley. £5.50 at £4 (paperback). 1973. 372 pages. Aims to provide an understanding of those aspects of physics which are encountered in a modern biology laboratory.

MM103: NEW TECHNIQUES IN BIOPHYSICS AND CELL BIOLOGY. R. H. Pain. Wiley. £11.40 at £6.50. Volume 1. 1973. 260pp.

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MM105: NEW TECHNIQUES IN BIOPHYSICS AND CELL BIOLOGY. R. H. Pain. Wiley. £14.55 at £8. Volume 3. 1976. 254pp.

DD04: GEODESY. Wolfgang Torge (Editor). Walter de Gruyter & Co. £13.70 at £10.75. This book is primarily intended for geodesy students whose areas of study include geodesy and surveying (also photogrammetry and cartography). It is meant to provide a systematic overview of reference systems, and of the collection and processing of data in both geodesy and geodetic surveying; in addition, it can serve as a text for reference.

MM86: GROWTH RHYTHMS AND HISTORY OF THE EARTH'S ROTATION. G. D. Rosenberg. Wiley. £36.80 at £20. 1975. 576 pages. Uses the history of the Earth's rotation as a unifying theme for papers in diverse aspects of geophysics, astronomy, paleontology and biology.

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MM90: PRIMARY COMMODITY EXPORTS AND ECONOMIC DEVELOPMENT: Theory, Evidence, and a Study of Malaysia. J. T. Thoburn. Wiley. £12.10 at £9. 1977. 326 pages. Aims to examine the role primary commodity exports can play in the development process in Third World countries.

MM91: COMMERCIAL BANK LOAN AND INVESTMENT BEHAVIOUR. J. H. Wood. Wiley. £10.50 at £7. 1975. 166 pages. Presents a study of the cyclical movements in commercial bank portfolios through times of economic expansion and recession.

S22: BRITISH INDUSTRY BETWEEN THE WARS. Edited by Neil K. Buxton and Derek H. Aldcroft. Scolar Press. £18.50 at £10. Ten case-studies by major British economic historians of key industries, from textiles to shipbuilding, in the inter-war period.

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MM145: ESSENTIAL MATHEMATICS FOR ECONOMISTS, 2nd Ed. J. Black. Wiley. £17.50 at £9.50 (cloth). 1980. 326pp. Concentrates on the two main aspects of mathematics as applied to economic problems—calculus and dynamic models.

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MM07: CRYSTALLINE PLASTICITY AND SOLID STATE FLOW IN METAMORPHIC ROCKS. A. Nicolas. Wiley. £30.40 at £10
1976. 462 pages. Gives a full account of the background of physical metallurgy necessary to describe and interpret structures of deformation in rocks.

MM08: FAUNAL PROVINCES IN SPACE AND TIME. F. A. Middlemiss. Wiley. £11.50 at £7.50
1971. 236 pages. Contains 13 contributions dealing with aspects of faunal provinces through the whole of Phanerozoic time.

MM09: CARBONATITE - NEPHELINE VOLCANISM: An African Case History. M. J. Le Bas. Wiley. £27.85 at £11
1977. 362 pages. Studies the geology of carbonatite-nephelinite igneous associations with a detailed study of the structural and petrological relations of examples within East Africa.

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BOOKS

Technological cuckoo

Early British Computers: the story of vintage computers and the people who built them
by Simon Lavington
Manchester University Press, £7.95 and £3.95
ISBN 0 7190 0803 4 and 0810 7

In the days of scholarship before Crossman and Castle, history was not written until time had shrunk the trivial and revealed the significant. We have changed all that. Anxiety to match the frenzied electronic chatter of broadcasting produces a rush of print to the press, and the data of history emerge as raw and indigestible from the one as from the other. So it may be that many, because they stubbornly continue to think of computers as a new invention, will expect little from a book on their history. But the four decades of computer existence have been quite long enough for their pioneers to age, and for machines and methods to change, change and change again. In its beginnings no one realized how large electronic computing would grow. The early workers thought only of making a machine or two for themselves, or for their close colleagues. Even an estimate of national need suggested that no more than two or three large computers could handle all the sums we would want to do. No one suspected what huge and hitherto untapped reserves of raw arithmetic would be uncovered, nor that computing would invade most of management, and seep insidiously into government, nor yet how large an industry would mushroom from so obscure a spore. It has been well said that "History never looks like history when you are living through it." No Boswell, therefore, thought to record the minutiae of former days—or, if he did, he has remained mute, inglorious.

Hence, it is good that Simon Lavington has written an account of the early British computers and those who made them; and that he has done so before memories fade and the pioneers have died. Modestly he calls his book a "story" and this is a fair assessment, for it is more than a chronicle but less than a history. This, it goes beyond an arid list of dates and events and conveys something of the excitement of that first decade (1945-55) when all was new. It describes the interactions, and some seminal non-interactions, of the young men who returned from wartime work on cryptography and radar used what they had learned—and not a few spare components—to put together the first electronic computing machines. Yet although this book presents a lucid and coherent account of the past it does not analyse it, as we would expect a history to do; the lessons, *pace* Hegel *et al*, remain latent. Of those that might have been drawn, three at least are far from new. The first is that it is folly to write off as academic whimsicality any research, the practical application of which is not instantly apparent to the planner and of the plain-men spectrum. We are outstandingly bad at recognising the market potential of really new ideas. The early development of computers began spontaneously and independently in several university laboratories, and resisted most well-intentioned attempts to coordinate or assist it. It would not have been wholly unreasonable to have dismissed it as the idle aberration of a few engineers-maqués among the mathematicians. That, after all, had been the attitude of the leading Victorian scientists to Charles Babbage. As we now know, a powerful new technology emerged, and grew like a cuckoo chick, the development of which usurped the resources, and is now threatening the prosperity of some traditional industries that were ensconced in the national nest long before computers.

The second lesson reiterates yet again the tiresome commonplace that we British are long on invention but short on exploitation. The book's concentration on the British contribution is justified by the fact that many of the significant developments were made in Britain but, alas, too few of the computers. Our industry has been far from idle; we have made our thousands, but others ten thousands. Lavington ends his book with the comment: "There is a moral here somewhere!" Let us hope that he will go on to find it in a further study of his absorbing material.

The third lesson is illustrated by the instructive story of Joe Lyons and LEO, which should remind us of what mistakes we can make if we focus too closely on stables and fail to examine the horses they produce. LEO was a class machine with many original features even though (in fact, because) it was born in a teashop. Some 90 per cent of the output of the computer industry has been sold to business users, but most of Britain's early computers were designed and made as engineering products. Perhaps the search for Lavington's missing moral should begin here.

This is not a book for the lumbering apparatus of academic criticism, nor for the zealous pursuit of nits. It is a book to read and enjoy. Its author has made it easy to do so, for his style is clear and fluent, and his text is brief and illustrated with many historic photographs. The book tells the stories of wartime computing, and of the contributions of the Universities of Manchester and Cambridge, the National Physical Laboratory and the National Research and Development Council. It traces the origins of the British computer industry in Ferranti, Elliott, J. Lyons, English Electric and in what became ICL. There are useful tabulations of the features of 15 early British and nine early American computers, and there is a convenient bibliography.

The book can be recommended to all computer specialists—the older for recollection, the younger to enlarge their perspective. It can be read by non-specialists also, for the techniques are kept under control and the personalities shine through.

Murray Laver

Murray Laver is an occasional lecturer and writer on computing.



Captive Siberian tiger showing the characteristic ruff around the cheeks of adults. The fur of this species is long and dense, in keeping with the cold climate. Taken from *Saving the Tiger* by Guy Mountfort, published by Michael Joseph at £7.95.

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BOOKS

Controlling the masses

Populism in Peru
by Steve Stein
University of Wisconsin Press,
£12.90
ISBN 0 299 07990 2

In its Latin American context populism is usually defined in terms of political movements which have successfully diverted the emerging urban masses away from revolutionary class-based activity into vertically grouped alliances, designed ultimately by their elite supporters to preserve existing social structures. The corporate states which this phenomenon produced in the 1930s and 1940s were headed typically by charismatic paternalists, who succeeded in magnifying the traditional patron-client relationships of earlier, more intimate times into large-scale political clientelism. At first sight Peru might seem to be an inappropriate model for a case study of populism, for neither of the two populist movements which entered the political arena there in 1931 to fight the country's first really popular presidential election ever succeeded in securing the political power of, for example, Peronism in Argentina or Getulismo in Brazil. Sánchez Cerro, the political vehicle of Luis M. Sánchez Cerro, the obscure army officer who had come to prominence only in August 1930, as the leader of the military coup which overthrew the government of Augusto Leguía, died with his leader's assassination in 1933, after only 16 months in the presidential palace; the more enduring APRA party, led by Victor Raúl Haya de la Torre, resorted to unsuccessful revolution after its electoral defeat in 1931, remained

outlawed until 1945, and thereafter was to see the armed forces intervene repeatedly to exclude it from power. But Professor Stein argues persuasively that the struggle between them in 1931 for the presidential vote created a political tradition in Peru—"the political tradition of populism"—which subsequent regimes, notably those of Manuel Odría (1948-1956) and the post-1968 military, were required to observe in order to maintain social control of the masses.

The focus for the book is the 1931 presidential election, and in particular the attempts of the principal contenders, Haya and Sánchez Cerro, to capture the support of the workers of Lima. The flowing, fascinating analysis emphasizes the similarity of the personal appeal to their differing constituencies of the upper-class intellectual and the dynamic middle-class officer. Haya's support was drawn from organized labour and displaced middle-class Leguistas, bewildered by the impact on Peru of the great depression, while Sánchez Cerro, although enjoying some elite and military backing, appealed essentially to the city's unskilled proletariat, which saw him as the destroyer of the dictatorship of Leguía and the source of free food for the poor in 1930.

The campaigns of both men reflected the rapid economic expansion of Peru in the 1920s, a process which had seen the population of Lima grow in a decade by 68 per cent (to 376,000), and its electorate multiply fivefold. Seventy-nine thousand metropolitan voters went to the polls in 1931, protected for

the first time by a secret ballot, compared with a mere 16,000 in 1919. Whether the 1931 electorate really constituted a "mass", as Professor Stein contends, is debatable. Nationally a mere 300,000 voted out of a total population of about five million, for illiteracy was to remain a bar to voter registration until 1978, thereby barring the real masses, both rural and urban, from electoral participation.

Here the national perspective is hardly considered, despite the fact that Lima contained only 28 per cent of those who voted in 1931. Arequipa, the second city of Peru, is mentioned only in passing as the source of several revolutions, including that led by Sánchez Cerro in 1930. The solid support for APRA in the north, around Trujillo, is merely hinted at, and the voting behaviour of the miners and refiners of central Peru is totally ignored. Yet Haya obtained 84,000 votes outside Lima, compared with 21,000 in the city, and Sánchez Cerro obtained 123,000 non-metropolitan votes and only 29,000 in the capital.

Despite this lack of balance—"Populism in Lima" would be a more accurate title—this work is excellent as far as it goes, and will be welcomed by all historians of modern Peru. It can also be recommended to those interested generally in populism for its confirmation of the importance in this case study of institutionalized political clientelism.

J. R. Fisher

J. R. Fisher is reader in Latin American history and dean of the social studies at the University of Liverpool.

The politics of 'dirty tricks'

Manipulative Politics
by Robert E. Goodin
Yale University Press, £11.30
ISBN 0 300 02463 0

This is a very American book. Politics, Goodin tells us at the start, is the science of power. Each age fastens on to the aspect of power most relevant to it. In the age of Watergate the kind of power to which political scientists will inevitably address themselves is that of manipulation or "dirty tricks". This new direction need not cause despondency, however. Manipulation is not merely the sordid side of politics, it provides the firm basis on which a truly scientific study of politics can be erected.

Goodin does not of course claim to present this new science in its entirety. He is labouring, he admits, in the pre-scientific vineyard. Further and more detailed investigations must be made before "really firm conclusions" can be reached. Nevertheless he believes that a new frontier in the development of political science is in prospect. Dahl and the rest must look to their laurels.

In Goodin's view, manipulation provides the basis for a truly scientific study of politics because it is a far less messy concept than that of power itself. Manipulation is the "evil core" of "ugliest face" of power, an unambiguous extreme. It is messy because, regardless of any end it may have in view, it is a "sneaky" way of doing things. Whatever we have to say against exercises of power in general, Goodin writes, "it surely goes

double for sneaky exercises of power". A blatant power play, if not quite honourable, is at least honest. Political manipulation does not even display this virtue. It is primarily what sets it off from— and makes it so much more objectionable than—other processes of "intimidating", "terrifying", "forcing", or "coercing". Unpleasant as they all are in other respects, these processes can at least boast as their saving grace that they are open and above board.

There is something naive and Boys Own Paper-ish about Goodin's moral strictures on manipulation. At its extreme standpoint is undermined by the examples that he discusses in the course of his book: lying, juggling with the symbols and rituals by rulers, and the rigging of "obvious" solutions to problems. That is, the 20 mechanisms of manipulation that Goodin examines under these headings meet his definition of the concept, and yet, far from revealing the evil core of power, they are judged by him to be largely innocuous. Far from manipulation being per se outrageous, it seems to depend on other factors before it becomes so. Moreover, the three forms of manipulation that Goodin does decide are largely innocuous: the use of magical rituals, the debasement of political language, and a particularly insidious mode of rigging the obvious—scarcely seem typical of manipulation because they are so impersonal. As Goodin says, they "cannot be

traced to the activities of anyone in particular but only to the relentless workings of systemic bias".

What has gone wrong here? I think the fault is traceable to the initial definitions. Goodin defines manipulation as "interference" that is "deceptive" and "contrary to the putative interests of the subject to it". He does not make clear, however, the ambiguity of the deception involved typically in manipulation. On the one hand there is the deception involved in making use of improper means to persuade people to act in a certain way. This is what we mean when we say that statistics, or the historical record, or the economy, or words, are being "manipulated": they are being distorted by being subordinated to purposes foreign to them. On the other hand there is the deception involved when people willingly follow the political lead or direction of other people, in the belief that they have the general interest or public good at heart, and subsequently discover that these leaders have been primarily motivated all in their own selfish ends. It is this post hoc sense of instrumentalization that is probably the most potent cause of the feeling and accusation of manipulation. Such deception does not seem to come into the category of lying, but rather that of treacherous betrayal of trust, it is hardly touched upon by Goodin.

Murray Forsyth

Mr Forsyth is reader in politics at the University of Leicester.

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Roy Hattersley, LISTENER

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This photograph taken in 1930 of a Hasidic and a Jewish Jewess, Carpatho-Rusians taken from Raphael Patai's *The Vanished World of Jewry*, which traces the history of those Jewish communities throughout the world which have disappeared either because of the Nazi persecutions or as a result of mass migration. Published by Weidenfeld & Nicolson, the book costs £12.50.

Generations of power

Stalin's Successors: leadership, stability and change in the Soviet Union
by Seweryn Bialer
Cambridge University Press, £12.50
ISBN 0 521 23518 9

The Soviet Union Since Stalin
edited by Stephen F. Cohen, Alexander Rabinowitch and Robert Sharlet
Macmillan, £12.50 and £4.95
ISBN 0 333 30867 0 and 30868 9

Why has Stalinism outlived Stalin? Democrats would have expected the pressure for human rights and political participation to have gradually undermined the phenomenon. Seweryn Bialer argues that the tenacity of the generation which entered politics during the last period of Stalin's rule goes a long way towards explaining it—as they have dominated high office since. But now the end is in sight for the Brezhnev generation, born between 1920 and 1930 and in power for about 40 years, and this could lead to the emergence of a new elite, one which has acquired its skills since the death of Stalin. How will these new men (few women will find their way to the top) behave, given the formidable military power their predecessors will bequeath them?

Many scholars are now dealing with these important issues; the two books under review are part of the first of which is devoted to an analysis of Stalinism suggesting reasons for its continuing vitality. In part two, Bialer takes a detailed look at the approaching succession and turnover of elites. Brezhnev has no obvious successor. As the saying goes in Moscow, this is no accident. A possible successor, Andrei Kirilenko, is three months older than Brezhnev. Most likely is that an interim leader will emerge and will be replaced in the mid or late 1980s. Hence the succession struggle, already under way (as the dropping of Aleksai Korygin as Soviet Prime Minister reveals) may last several years and this may mean that strong Soviet leadership will be lacking until the late 1980s. The generation which stands to gain most is that born in the 1920s.

Nowadays it is usual for top government and party posts to be filled by the outgoing person's deputy. This may have led to great stability among top appointments but it has also created a formidable promotion blockage. In part three, Bialer examines the nature and extent of Soviet political stability, suggesting that among the reasons for this are the increasing institutionalization of politics under Brezhnev (in sharp contrast to the Khrushchev period) and the tendency among most

groups of the population to rely for resources rather than for power—to make the system work rather than to undermine it. Youth, potentially very valuable, orient their lives towards career and leisure.

A major destabilizing factor is the national question: the Soviet man is slow to make his appearance, with national competition increasing in several republics. In his fourth section Bialer analyses the role of the military factor in international relations. The United States occupies a central place in Soviet thinking and the Kremlin desperately seeks American recognition for its achievements. Much of the policy of the Central Administration, deeply offended by Moscow—if the goal was to keep sensitive nerves then it succeeded. Recent American failures have caused the United States to be seen away from the use of force in international relations. The Soviet national question has not such a simple answer as Bialer says, it has revealed a more complex and sensitive nerve than he suggests.

Physical geography is a broad subject, covering meteorology and climate, hydrology, vegetation and soils, and landforms. Its basic principles are those of the physical sciences, although only a minority of students come to it with a scientific background. The best case for a unitary text is therefore in background science where the relevant methods are well established even if the parts which are considered most relevant change gradually. The traditional subject matter of physical geography proper does not lend itself to this treatment, and would therefore argue for specialist rather than general text should only be needed for use with even first-year lecture courses.

Most students reach university with a background in school geography, and for most of those a general text should only be needed for use with even first-year lecture courses. The traditional subject matter of physical geography proper does not lend itself to this treatment, and would therefore argue for specialist rather than general text should only be needed for use with even first-year lecture courses.

The publication of Professor King's new book on physical geography prompts the question of the purpose of any introductory text for undergraduates. Is it as a course text, knowledge of which guarantees satisfactory examination results in the first year? Is it as a text from which one or more parts of courses may be drawn, knowing that it goes well beyond what can be taught directly, and so provides much of the additional reading needed on the topics it covers? Is it as a reference book which lecturers can take for granted and build on, so that they can stimulate students with confidence that their foundations are secure?

The answer to these questions depends very much on one's view of university teaching and learning and on the nature of the subject material. If students should, from their first year, read journal articles as well as books (and if at least crucial articles are adequately replicated in a text for first-year class numbers), then an introductory text can only fulfil the third need—that of prerequisite reading before attending a lecture course.

Martin McCauley

Martin McCauley is lecturer in Russian and Soviet history at the School of Slavonic and European Studies, University of London.

BOOKS

Traditional geography

Physical Geography
by Cuchlaine A. M. King
Blackwell, £16.00 and £6.50
ISBN 0 631 18950 5 and 11081 X

The publication of Professor King's new book on physical geography prompts the question of the purpose of any introductory text for undergraduates. Is it as a course text, knowledge of which guarantees satisfactory examination results in the first year? Is it as a text from which one or more parts of courses may be drawn, knowing that it goes well beyond what can be taught directly, and so provides much of the additional reading needed on the topics it covers? Is it as a reference book which lecturers can take for granted and build on, so that they can stimulate students with confidence that their foundations are secure?

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It may alternatively be considered that for many first-year students library facilities and time are inadequate, and their knowledge insufficient to justify reading more than a very few original articles, but that some guided reading beyond the immediate lecture context is desirable. In this case, the second need is dominant: for specialist rather than general texts, but texts which assume little or no previous background knowledge. Such texts will probably need to be supplemented by selected readings which can be available in libraries in multiple copies, either collected as an edited publication or less formally. The first need, for a unitary and self-sufficient text, is only dominant where a substantial exposition of well-established principles and techniques is needed at the start of the undergraduate course.

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discharge records, a discussion of groundwater and the catchment water balance. Sediment yield is also examined, mainly in relation to vegetation and climate. At the regional and continental scale, river regimes are considered for Britain and elsewhere, and glacier mass balances described.

Finally, the hydrological cycle is discussed in terms of global water balances. There are thus 40 pages of hydrology spread through the book and they together form an account which is certainly well balanced, perhaps at the expense of generating any excitement about new developments in the subject and inevitably at the expense of any great depth. This pattern for hydrology is representative of all the major topics.

An important feature of the book is the series of 76 exercises spread through the chapters, and answered extensively in the final section. The exercises, on the whole, are done by the reader without the need for additional reading, except where specified—so, for example, on statistical methods. They demand enough thought to establish that a proper grasp of the chapter material has been acquired, and they are done as a whole useful and useable either for self instruction or as a class text at a sufficiently elementary level.

Perhaps the greatest opportunity lost in a text which covers such a range of topics is the chance to emphasize and analyse the links between them. Although some links between topics are mentioned, they are rarely if ever analysed in as much detail as are the topics themselves, so that the reader is not encouraged to see the earth's surface as the interconnected system which it really is. Soils, landforms, water and vegetation, for example, remain largely isolated subjects for discussion instead of facets of the whole, with linkages which are only limited by one's point of view, whether as geomorphologist, ecologist or what you will.

To summarize, *Physical Geography* is a thoroughly worthy but somewhat unexciting book with a rather traditional approach. It is useful as a reference text for university work and is valuable if that is what you want. However, I will not be recommending it for my first-year undergraduate courses.

M. J. Kirkby

M. J. Kirkby is professor of physical geography at the University of Leeds.

Classifying engineering materials

Introduction to the Selection of Engineering Materials
by D. P. Hanley
Van Nostrand Reinhold, £9.75
ISBN 0 442 30431 5

The number of engineering materials in current use runs into the thousands, with a wide variety of properties used to specify their characteristics. The task that Dr Hanley has embarked upon is therefore a daunting one. His approach is to classify materials into three main groups: a metallic group comprising ferrous and non-ferrous alloys; an intermediate group dealing with such materials as ceramics and composites; and a non-metallic group comprising plastics, composites, rubbers, elastomers and materials such as wood.

In order to overcome the problem of the vast number of individual materials, those in each sub-group are dealt with as types or families. Thus, in the rather brief section on ferrous materials, the large number of steels is reduced to nine major groupings. In discussing the non-ferrous alloys the major element is considered first (for example, aluminium) followed by its alloys. The selected other words are the alloy varies but there is genuine attempt to identify the major properties and to give contemporary examples of use.

Properties are dealt with mainly in a descriptive way, it being the author's intention to show how the book may be used in approaching the selection of a

material in this way. It also lacks an adequate index: cross-referencing, for example, from common applications to materials in current use would have been an extremely useful addition for professional engineer and student alike.

In training engineers, the practical aspects of material selection need to be considered, there being little value in specifying materials which are not available in time or are too expensive for the application under consideration. In practice, materials are chosen not only because properties are suitable but also because they are available at the right price; comments on these aspects are made in passing but require greater emphasis.

The book is really an attempt to give a general insight into the range of materials used in engineering, although the nature of the data is such that more use could have been made of charts and tables. As a reference work it gives many useful facts but in my opinion it would be more appropriate if the word "selection" were omitted from the title and the book simply called *An Introduction to Engineering Materials*. Perhaps this is the true feeling of the author who actually considered *What I would have liked to have known about materials 20 years ago* as an alternative title.

D. G. Smith

D. G. Smith is lecturer in the Engineering Design Centre, Department of Materials Engineering and Design, Loughborough University of Technology.

Semiconductor devices

Physics of Semiconductor Laser Devices
by G. H. B. Thompson
Wiley, £22.75
ISBN 0 471 2768 55

Development of semiconductors which can transcend the capabilities of silicon and germanium, in order to provide useful devices for light emission, has proved extremely difficult. There are interesting parallels between the two types already developed: light emitting diodes (LEDs) and injection lasers. Both require the mastery of semiconductor from an entirely new class, the III-V binary compound materials. The necessary mastery involves a deep understanding of many physical processes, while the development of adequate devices requires a combination of skills, particularly in chemistry and metallurgy, relevant for the many processing steps inevitably necessary.

Practical LEDs eventually emerged at the same time as parallel, independent developments in silicon-integrated circuitry permitted the construction of miniature electronic circuits of considerable potential. These developments provided immediate sophisticated outlets for the application of LEDs as numeric and alpha-numeric indicators. Examples include the pocket calculator and table-top computer, as well as relatively mundane single-element indicators of the status of electronic circuits.

The critical problems for the development of injection lasers were different. Absence of the requirement to produce light of high luminous equivalent, a central difficulty for the LEDs, permitted the use of more efficient emitters. These were initially provided by direct gap III-V binary semiconductors, which are limited to near infrared light emission. However, the inherently very much greater operating stress of the injection laser, compared with the most LEDs, ensured that degradation effects were much more prominent. New physical phenomena needed understanding and control before injection lasers could be made with practical lifetimes. The struggle to achieve this occupied most of the early 1970s.

The final emergence of customer-tolerant devices in the latter part of this decade fortunately coincided with strong growth in the demand for such devices as the new communications revolution began to gather pace. This revolution is driven by pressure on the use of traditional forms of telecommunication as well as the introduction of new services, generally characterized by large capacities for bandwidth in the transmission system. Examples are cable TV, more rarefied computer interconnections, a variety of data services for home as well as business customers and the slow but sure introduction of the TV phone, delayed from the preceding decade.

These pressures are sufficient to guarantee the transformation of optical communications from the status of an optimistic ambition adopted by a small but enthusiastic band of proponents, which it enjoyed during the late 1960s and, with increasing momentum, during the 1970s, into a major feature in the communications industry during the next decade. The timely book deals with one major component of this new system, the light source, and is written largely from the viewpoint of an expert device designer. It is primarily concerned with such factors as the distinctions between the considerable variety of physical structures already explored, involving homojunctions, heterojunctions, various forms of stripe devices and devices with separate confinement of electrical carriers and the light generated by their recombination, distributed feedback lasers; as well as with the wave-guide, dynamic response, thermal and other key features of all these devices.

These topics are extensively treated in chapters illustrated with many well-chosen diagrams showing the influence of many important design parameters, including several three-dimensional representations of

energy band potentials and of the electromagnetic field within important classes of device. The whole subject is introduced with a brief chapter, well written from a historical viewpoint, including a review of crystal growth and other techniques of device manufacture. Most succeeding chapters contain valuable introductory comments.

The second chapter introduces the considerable subject of radiative recombination processes in semiconductors and their analytical description, emphasizing the near-gap processes in the direct gap semiconductor, GaAs, of greatest interest in injection lasers. This chapter leads into quantitative discussions of all the major device characteristics of injection lasers, characterizing the optical modes. The whole book is well laid out and indexed, with a comprehensive list of the many symbols which are necessary and a selective list of references with each chapter.

There is no explicit indication of the intended readership. The material is very clearly presented, liberally sprinkled with penetrating comparisons and analogies, of physical insight. However, the complexity of the topic, when discussed as thoroughly as here, probably ensures limitation to the postgraduate level for such specialists as solid-state physicists and electronic engineers. It will clearly be a key item for the acclimatization of new recruits into the large research and development group on this topic in the author's laboratory and in the many similar laboratories in other organizations within the United Kingdom and overseas.

Finally, the justified emphasis on mainstream laser devices, particularly the GaAs-GaAlAs system, has encouraged a few inaccurate statements and surprising omissions. For example, there is no mention of special luminescence activators, such as isoelectronic traps. These are particularly important in indirect gap semiconductors where they can support laser action. In contrast to the statement on page 10, it is not true that electrons in indirect minima do not radiate (page 13). Near gap light emission can be very efficient in indirect gap semiconductors, at least at low temperatures, even without the intervention of isoelectronic traps.

Such statements are adequate within the specific context of the main part of this book, but require brief qualification in the introductory chapter if the book is to be used by readers without expert backgrounds in this subject. Some of this material might be dealt with by reference to appropriate specialist review articles. Although the intention to place some remarks on this method of additional coverage is indicated on page xv, unfortunately no listing of such suitable references is provided in a collected form. There are remarkably few typographical errors, including incorrectly numbered references.

In summary, despite the minor blemishes mentioned above, this book can be strongly recommended as a well written, expert and detailed account of an important and timely technical subject, one which will affect all of us to some degree in the near future.

P. J. Dean

P. J. Dean is a principal scientific officer at the Royal Signals and Radar Establishment, Great Malvern.

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NOTICE BOARD

Noticeboard is compiled by Patricia Santinelli and Milla Goldie

Chairs

Dr Anthony Cross has been appointed to the chair of Russian and headship of the department of Russian studies at the University of Leeds from October 1, 1981, in succession to the late Professor F. M. Borras. Dr Cross has been reader in Russian in the School of Modern Languages and European History at the University of East Angles since 1972.

Dr John Ignatius Cronin, reader in the Queen's University of Belfast, has been appointed to the chair of English at the same university.

Professor T. M. Husband, professor of manufacturing organization at Loughborough University of Technology, has been appointed to the chair of engineering manufacture at Imperial College with effect from May 1, 1981.

Mr J. K. Duff, formerly senior research consultant to ICL, has been appointed to the chair of information science and technology at Queen Mary College.

Dr M. Skilbeck, director of the Australian Curriculum Development Centre, has been appointed to the chair of education with special reference to curriculum studies at the Institute of Education with effect from May 1, 1981.

Dr G. Stewart, lecturer in botany at the University of Manchester, has been appointed to the chair of botany at Birbeck College.

The title of professor of pharmacology has been conferred on Dr T. B. Bolton in respect of his post at St George's Hospital Medical School.

The title of professor of biochemical pharmacology has been conferred on Dr D. S. Davies in respect of his post at the Royal Postgraduate Medical School.

The title of professor of applied electromagnetics has been conferred on Dr E. M. Freeman in respect of his post at Imperial College.

The title of professor of economics has been conferred on Mr P. R. G. Layard in respect of his post at the London School of Economics and Political Science.

Honorary degrees

Glasgow

The following will be awarded honorary degrees on June 17.

L.D. Sir John Cameron, senior judge of the College of Justice in Scotland; Professor Ahmed Cemal Eringen, professor of continuum physics and civil engineering at Princeton University; Professor Frank McClinch, professor of mechanical engineering at the Massachusetts Institute of Technology; Professor S. Francis, Charles Milson, professor of law at the University of Cambridge and Fellow of St John's College, Cambridge; Sir Thomas Alexander Fraser Noble, principal and vice-chancellor of the University of Aberdeen; Air Commodore Helen Ranton, director of the Women's Royal Air Force; The Hon Lord Alexander John Mackenzie Stuart, judge of the Court of Justice of the European Communities in Luxembourg; Mr Anton Lang, professor of botany and plant physiology at Michigan State University; Mr Sydney Brenner, of the Medical Research Council Laboratory of Molecular Biology at Cambridge.

Hull

The following are to receive honorary degrees in July:

Dr G. Albert Nuberger, Emeritus professor of chemical pathology, St Mary's Hospital, University of London; Sir Peter Kent, consultant geologist, Richardson, president of the General Medical Council.

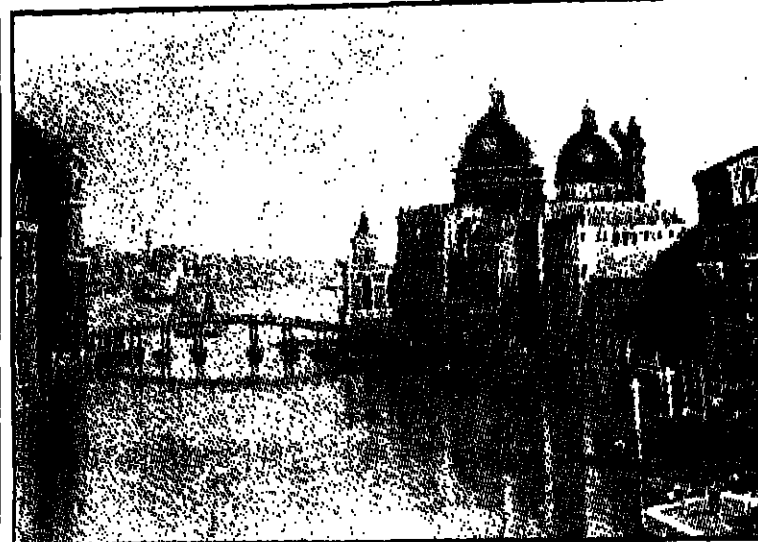
DSc Recd: Professor W. J. M. Mackenzie, Emeritus professor of politics Glasgow University.

L.D. Dr E. P. Thompson, reader in social history and former director of the Centre for the Study of Warburg until 1971.

L.D. Dr S. T. Matur, until recently high commissioner of Guyana, is to be delivered by Sir John Dudding, chairman, Humber-side Area Health Authority.

MSc: Mr J. J. Wise, executive secretary of the Universities Central Council on Admissions.

MA: Mr Brian Rix, secretary general of MENCAP, the National Society for Mentally Handicapped Children and Adults.



One of Laurence Irving paintings exhibited at the Fortescue Swann Galleries in London until February 27 to coincide with the "The Irving Inheritance", a series of six family conversations with Mr John Miller of the Open University on Radio 4 from February 15. Laurence Irving, grandson and biographer of Sir Henry, recalls his grandfather, and looks back on his own career.

Forthcoming events

The Friends Centre in Ship Street, Brighton, a voluntary adult education centre is mounting a sponsored teaching course from February 23 to 25 to discuss the value of adult education to the local community, as well as part of its exercises to raise funds for the centre which needs around £20,000 to survive. The week will consist of a continuous series of lectures, recitals, films, plays, exhibitions and activities. Further details from John Traylor, Friends Centre, Ship Street, Brighton BN1 1AF.

"Islam in Great Britain" the Stevenage Lecture 1980-81 is to be delivered by Dr N. A. Zaid Badawi director of the Islamic Cultural Centre and London Central Mosque on February 24 at 5.15 in Tuke Hall, Bedford College, University of London, Regents Park, London NW1.

The National Conference on Physical Education in and for the Community is to be held at the Rainbow Suite, 59 Kensington High Street, London W8, from February 24 to 25. It will consider the major issues of the day, together with the challenges inherent in them with a view to speeding up a coordinated approach to the problems.

"The Hidden Curriculum: Higher Education as Ideology" a discussion with Gerald Collier, former principal of Leeds College, Durham, and Dennis O'Keefe, department of teaching studies, North London Polytechnic, will be held on February 26 at 7.30 pm in Room 685 of the Institute of Education, Bedford Way, London WC1. For further details contact Mr R. Barnett, at the Council for National Academic Awards.

Grants

Bristol

Physics—£64,883 from the SRC to research in analysis of cosmic ray isotopes down to energies of 10¹⁰ eV. Plastic within LDEF collimator under direction of Professor P. J. Fowler, £36,167 from the SRC to research in microdistribution of alpha-particle activity in the lung, under direction of Dr D. L. Shaw.

Civil engineering—£57,800 from the SRC for research on the effect of fatigue strength of wire rope in water from the microdistribution of the young animal by colonisation of Dr M. S. G. Cullimore and Dr J. Veterinary medicine—£50,243 from the SRC for research on colonisation of the young animal by colonisation of Dr A. H. Linton and Dr M. L. L. £35,178 from the Wellcome Trust to research in immunisation of disease in the cat, under direction of Professor P. J. Bourne, Dr V. L. and Dr T. J. Newby.

Advanced Urban Studies—£41,000 from the Department of Environment for research on speed economy and diversity in local plan regions, under direction of Dr C. F. and Dr J. Underwood.

Geology—£40,578 from the SRC to research on the relation of tectonic layer parameters to bedrock in the Celtic Sea, under direction of Dr Hamilton.

Social administration—£35,811 from the SRC for research on the impact of unaccompanied British children to Canada 1867-1917 under direction of Professor R. A. Parker.

Pathology—£25,141 from the SRC for research on the role of the T cell recognition of B cell lineages, under direction of Dr R. A. Parker.

Pathology—£25,141 from the SRC for research on the role of the T cell recognition of B cell lineages, under direction of Dr R. A. Parker.

Biochemistry—£23,009 from the SRC for research on protein under direction of Dr J. J. Hootbrook and Dr J. England.

Classified Advertisements

To place your advertisements write to:

The Advertisement Manager, The Times Higher Education Supplement, P.O. Box 7, New Printing House Square, Gray's Inn Road, London WC1X 8EZ. Tel. 01-837 1234.

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Fellowships and Studentships
Appointments vacant:
Universities

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Technical Colleges
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Rates:
Classified Display—£7.25 psc
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@ £65.25
Classified Linage—£1.40 per line
Minimum 3 lines—@ £4.20
Box number—£2.00
Copy deadlines:
Classified Display:
Friday in the week prior to publication
Classified Linage:
Monday 10.00 am in the week of publication

Universities

FEDERAL UNIVERSITY OF TECHNOLOGY

BAUCHI STATE, NIGERIA

Applications are invited from suitably qualified candidates for:

Professorships, Associate Professorships and Lectureships in the following fields:

1. Pure Mathematics.
2. Applied Mathematics or Engineering Mathematics.
3. Physics with specialisation in any other area of theoretical Physics, Electronics and Cloud Physics. Candidates with specialisation in Nuclear Physics will also be considered.
4. Chemistry with specialisation in Physical, Inorganic or Organic Chemistry. Candidates with specialisation in industrial application will be an advantage.
5. Botany.
6. Biology.
7. Geology with special interest in mining geology.
8. Electronics.
9. Communications Engineering.
10. Power Systems Engineering.
11. Water Resources and Irrigation.
12. Construction Management.
13. Structural Engineering.
14. Automotive Engineering.
15. Mechanical Design and Manufacture.
16. Agricultural Engineering.
17. Directing of Centre for Industrial Development.

Salaries and other benefits

Salary scale:
Professorships: GL 46 N1,504-2,720
Associate Professorships: GL 45 N1,026-1,526
Lectureships:
Senior: GL 43 N1,026-1,526
Grade II: GL 42 N7,404-8,062
Grade III: GL 40 N6,700-7,372

Directors:
GL 48 or GL 49 depending on the experience of appointee. One Naira = 750. These salaries are currently under review. There is a contractual addition of 25% on basic salary for contract appointees, 10% payable with salary and 15% payable at the end of contract.

In deserving cases there is, in addition, a supplementation allowance paid in foreign currency to appointees' account outside Nigeria. Housing is provided at a subsidised rate of 6% of salary, but not exceeding a maximum of N500.00 per annum.

Qualifications
For professorships and associate professorships evidence of scholarship in a candidate's field of specialisation carries more weight than several years of teaching. Evidence of innovation through designs, patents that have been successfully translated to practice will be accorded the same recognition.

university college of swansea

Chair of Education

Applications are invited for the Chair of Education and the Headship of the Department of Education, which will become vacant on September 30, 1981, at the retirement of Professor D. Pritchard.

Further particulars may be obtained from the undersigned, University College of Swansea, Singleton Park, Swansea SA2 8PP, to whom applications (15 copies) should be sent by Friday, April 3, 1981.

UNIVERSITY OF ZAMBIA

Applications are invited for three posts of:
PROFESSOR/ASSOCIATE PROFESSOR/
SENIOR LECTURER/LECTURER IN
GEOLOGY

In the School of Mines, Applicants should be qualified in Geology or Engineering Geology or Structural Geology. They should hold a degree of appropriate professional experience. For the more senior posts, evidence of research ability is required. Salary scale: Professor K11,352-K12,352 p.a.; Associate Professor K10,026-K11,026 p.a.; Senior Lecturer K8,700-K9,700 p.a.; Lecturer K7,372-K8,372 p.a. The British Government may provide salary supplementation, at a rate to be calculated, and associated benefits. Two to four-year contract; biennial review; leave; gratuity; family passages; baggage allowance.

Detailed applications (two copies), including a curriculum vitae and recent three references, should be sent to the University Secretary, University of Zambia, PO Box 31328, Lusaka, Zambia, to arrive no later than 18 March, 1981. Applicants resident in UK should send one copy to the University Secretary, PO Box 31328, Lusaka, Zambia, to arrive no later than 18 March, 1981. Further details are available from other sources.

UNIVERSITY OF ZAMBIA

Applications are invited for four posts of:
RESEARCH OFFICER IN THE
INSTITUTE FOR AFRICAN STUDIES

In Arts, Communication Studies, Mental Health or Urban Community Research. Appointment will be at Professor, Associate Professor, Senior Lecturer or Lecturer level depending on qualifications and experience. Applicants should hold a doctorate or equivalent research degree. Salary scale: Professor K11,352-K12,352 p.a.; Associate Professor K10,026-K11,026 p.a.; Senior Lecturer K8,700-K9,700 p.a.; Lecturer K7,372-K8,372 p.a. The British Government may provide salary supplementation, at a rate to be calculated, and associated benefits. Two to four-year contract; biennial review; leave; gratuity; family passages; baggage allowance.

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UNIVERSITY OF ZAMBIA

Applications are invited for the post of:
SENIOR ASSISTANT LIBRARIAN/
ASSISTANT LIBRARIAN

with special responsibilities for the MEDICAL LIBRARY. Applicants should have a degree in basic education plus postgraduate library qualifications or A.L.A. diploma and at least two years experience in a medical library. Salary scale: Senior Assistant Librarian K8,372-K9,372 p.a.; Assistant Librarian K7,372-K8,372 p.a. The British Government may provide salary supplementation, at a rate to be calculated, and associated benefits. Two to four-year contract; biennial review; leave; gratuity; family passages; baggage allowance.

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The University of London

The London School of Economics

LECTURESHIPS (TWO) IN INDUSTRIAL RELATIONS

Applications are invited for appointment from 1st October, 1981, to a lectureship in Management Sciences in the Department of Statistical and Mathematical Sciences, and should have an established and continuing research interest in a major mathematical-based subject area. Practical experience in applying mathematical science to social sciences, the management of public or private sector organisations would be an advantage.

Appointment will be on the salary scale for Lecturers of £2,905 to £11,678 a year (under review) plus 1987 a year London allowance. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Application forms and further particulars are available, on receipt of a stamped, addressed envelope, from the Administrative Officer, L816, The London School of Economics, Houghton Street, London WC2A 2AR. Closing date for applications: 31st March, 1981.

LECTURESHIP IN MANAGEMENT SCIENCES

Applications are invited for appointment from 1st October, 1981, to a lectureship in Management Sciences in the Department of Statistical and Mathematical Sciences, and should have an established and continuing research interest in a major mathematical-based subject area. Practical experience in applying mathematical science to social sciences, the management of public or private sector organisations would be an advantage.

Appointment will be on the salary scale for Lecturers of £2,905 to £11,678 a year (under review) plus 1987 a year London allowance. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Application forms and further particulars are available, on receipt of a stamped, addressed envelope, from the Administrative Officer, L816, The London School of Economics, Houghton Street, London WC2A 2AR. Closing date for applications: 31st March, 1981.

University of Surrey

Department of Hotel, Catering and Tourism Management

Lecturer in Catering

Applications are invited for this new post in the food and beverage operations group of the Department. A suitable candidate will have industrial experience in food production and service together with knowledge of curriculum development. Research interests will be encouraged.

Salary will be in the range £5,505-£11,575 per annum. Further particulars about the post are available from the Academic Registrar (LFG), University of Surrey, Guildford, Surrey GU2 5XH, to whom applications should be made via a stamped and addressed envelope, and names of two referees by 23rd March, 1981, quoting reference (3) THE8.

Open University programmes February 21 to February 27

Saturday February 21

8.00 Introduction to pure mathematics: 1. The real numbers (1981) p. 1.

8.05 Information systems: 1. Systems (1981) p. 1.

8.10 Technology and the environment: 1. The environment (1981) p. 1.

8.15 Technology and the environment: 1. The environment (1981) p. 1.

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8.25 Technology and the environment: 1. The environment (1981) p. 1.

8.30 Technology and the environment: 1. The environment (1981) p. 1.

8.35 Technology and the environment: 1. The environment (1981) p. 1.

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8.45 Technology and the environment: 1. The environment (1981) p. 1.

8.50 Technology and the environment: 1. The environment (1981) p. 1.

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11.30 Technology and the environment: 1. The environment (1981) p. 1.

Sunday February 22

8.00 Understanding space and time: 1. Space and time (1981) p. 1.

8.05 Understanding space and time: 1. Space and time (1981) p. 1.

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KENY.

KENYA
UNIVERSITY OF NAIROBI
Applications are invited for
the following posts in the
Faculty of AGRICULTURE:-
(1) PROFESSOR IN
DEPARTMENT OF SOIL
SCIENCES
Applicants must be Soil
Scientists holding a Ph.D.
degree in soil science or an

experience. Familiarity with the African environment is an advantage. They should be specialists in one or more of the following: Soil Fertility, Soil Survey, Soil Fertility, Soil Conservation, Soil Chemistry, etc. They will be expected to teach and supervise students in the appropriate courses, supervise practical programmes and provide leadership in agricultural development activities in Kenya.

Salary scale: K£5,400 to K£6,500 per annum (K£ means £ per sterling). The British Government may provide salary supplementation in range £7,282 to £10,770 per annum (sterling) (reviewed annually) and associated benefits, F.R.S.U. Non-contributory medical scheme; subsidized housing.

Detailed applications (two copies), including a curriculum vitae and naming three referees, should be sent to the Registrar (Recruitment and Training), University of Nairobi, P.O. Box 297, Nairobi, Kenya, to arrive no later than March 31, 1981.

LONDON
THE CITY UNIVERSITY
CHAIR OF PROPERTY
VALUATION AND
MANAGEMENT

Applications are invited for the above CHAIR, which has been established as a result of the Appeal launched by an Educational Trust set up by members of the Royal Institution of Chartered Surveyors.

Candidates for the post should have proven expertise in property valuation and associated fields and teaching experience is desirable. The Professor will be responsible for the development of a new B.Sc. course in Property Valuation and Management which begins in October, 1981. In addition to teaching and developing new courses of study, the Professor will also be expected to liaise and take part in research work. The salary will be within the range of professional appointments. Plus a London allowance.

Allowance of £987 p.a. and superannuation benefits.
Further particulars of the appointment and application forms may be obtained from the Academic Registrar, The City University, Northampton Square, London EC1A 3BX.
Tel: 01-253 4399, ext. 251.

LONDON
WESTFIELD COLLEGE
(The University of London)

LECTURESHIP IN ENGLISH
(Tenable 1981-1st October, 1981)

Applications are invited for two lectureships in the Department of English in the School of Arts, University of Liverpool, from 1 October, 1981. Candidates for both posts should be qualified to teach in the Middle English area, and have an interest in a later period (preferably Renaissance) would be an advantage. The appointments would be made on one of the first five points of the lecturer scale (up to £6,985 plus £967 London weighting).

Applications (6 copies) should be sent by 15th March, 1981, to the Personnel Department, Wealden College, Kingspore Avenue, Hasted, London NW3 1ST; telephone: 01-434 7141 Ext. 260 from whom further details may be obtained.

OXFORD
TRINITY COLLEGE
LECTURESHIP IN LAW

The College proposes to appoint a Lecturer in Law for three years (from October, 1961, to teach either nine hours or 12 hours a week by arrangement with the College. The stipend for 12 hours will be not less than £4,800, plus free accommodation or a housing allowance.

Further particulars may be obtained from the College Secretary, to whom applications should be sent to arrive by Wednesday, 25 March. These should include particulars of age, career and qualifications.

OXFORD
THE QUEEN'S COLLEGE
RANDALL MACIVER
STUDENTSHIP IN
ARCHAEOLOGY

The College proposes to elect a (Randall) Maciver, of this in Archaeology, holds from October 1, 1961. The University is open to members of the University.

who have obtained First or Second Class Honours at any University in the United Kingdom and are engaged in research relating to the material civilization of any country or period before AD 1000, including the Prehistoric, American Continent and Greek and Roman Archaeology. Italy before 300 BC is, however, a legitimate subject.

Further particulars may be obtained from the College Secretary, The Queen's College, Oxford. Applications are required by March 10, 1981.

Universities continued

LONDON

UNIVERSITY COLLEGE LONDON

FABRICET SCHOOL OF ARCHITECTURE AND PLANNING

Applications are invited for the post of Research Assistant in the Department of Planning. The successful candidate will be responsible for the design and construction of a model of the urban environment. The post is part-time and involves a commitment of 10 hours per week. Salary: £3,000 per annum. Closing date: 20th March 1981.

SYDNEY

THE UNIVERSITY OF SYDNEY

DEPARTMENT OF POLITICAL SCIENCE

LECTURER IN MANAGEMENT STUDIES

Applications are invited from suitably qualified persons for the post of Lecturer in Management Studies. The successful candidate will be responsible for the teaching and supervision of students in the Department of Political Science. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

SURREY

THE UNIVERSITY OF SURREY

DEPARTMENT OF POLITICAL SCIENCE

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SOUTHAMPTON

THE UNIVERSITY OF SOUTHAMPTON

DEPARTMENT OF POLITICAL SCIENCE

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ST. ANDREWS

THE UNIVERSITY OF ST. ANDREWS

DEPARTMENT OF POLITICAL SCIENCE

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SUDAN

UNIVERSITY OF JUBA

COLLEGE OF NATURAL SCIENCES

LECTURER IN PHYSICS

Applications are invited from suitably qualified persons for the post of Lecturer in Physics. The successful candidate will be responsible for the teaching and supervision of students in the College of Natural Sciences. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

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The Polytechnic of Wales

POLYTECHNIC CYMRU

DEPARTMENT OF SOCIAL STUDIES

LECTURER II SENIOR LECTURER IN PSYCHOLOGY

Applications are invited from suitably qualified persons for the post of Lecturer II in Psychology. The successful candidate will be responsible for the teaching and supervision of students in the Department of Social Studies. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

WALES

THE UNIVERSITY OF WALES

DEPARTMENT OF POLITICAL SCIENCE

LECTURER II IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer II in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the Department of Political Science. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

MANCHESTER

THE POLYTECHNIC OF MANCHESTER

DEPARTMENT OF POLITICAL SCIENCE

LECTURER II IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer II in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the Department of Political Science. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

SURREY

THE UNIVERSITY OF SURREY

DEPARTMENT OF POLITICAL SCIENCE

LECTURER II IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer II in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the Department of Political Science. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

SURREY

THE UNIVERSITY OF SURREY

DEPARTMENT OF POLITICAL SCIENCE

LECTURER II IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer II in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the Department of Political Science. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.



LECTURER

ROBERT GORDON'S INSTITUTE OF TECHNOLOGY, ABERDEEN

SCHOOL OF MECHANICAL AND OFFSHORE ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the School of Mechanical and Offshore Engineering. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

The Polytechnic of North London

FACULTY OF SCIENCE AND TECHNOLOGY

HEAD OF DEPARTMENT OF FOOD AND BIOLOGICAL SCIENCES (Grade V)

Applications are invited from suitably qualified persons for the post of Head of Department of Food and Biological Sciences. The successful candidate will be responsible for the teaching and supervision of students in the Faculty of Science and Technology. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

WOLVERHAMPTON

THE POLYTECHNIC OF WOLVERHAMPTON

DEPARTMENT OF POLITICAL SCIENCE

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DUNDEE COLLEGE OF TECHNOLOGY

DEPARTMENT OF ACCOUNTANCY & ECONOMICS

Senior Lectureship (A) in Accountancy

Applications are invited from suitably qualified persons for the post of Senior Lectureship in Accountancy. The successful candidate will be responsible for the teaching and supervision of students in the Department of Accountancy and Economics. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

Senior Lectureship (A) in Economics

Applications are invited from suitably qualified persons for the post of Senior Lectureship in Economics. The successful candidate will be responsible for the teaching and supervision of students in the Department of Accountancy and Economics. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

Polytechnics continued

LONDON, S.E.1

POLYTECHNIC OF THE SOUTH BANK

DEPARTMENT OF MODERN LANGUAGES

LECTURER IN FRENCH

Applications are invited from suitably qualified persons for the post of Lecturer in French. The successful candidate will be responsible for the teaching and supervision of students in the Department of Modern Languages. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

SUNDERLAND

THE POLYTECHNIC OF SUNDERLAND

FACULTY OF HUMANITIES

LECTURER II IN SOCIAL WORK

Applications are invited from suitably qualified persons for the post of Lecturer II in Social Work. The successful candidate will be responsible for the teaching and supervision of students in the Faculty of Humanities. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

WOLVERHAMPTON

THE POLYTECHNIC OF WOLVERHAMPTON

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SURREY

THE UNIVERSITY OF SURREY

DEPARTMENT OF POLITICAL SCIENCE

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COUNTY OF AVON

BATH COLLEGE OF HIGHER EDUCATION

Newton Park, Newton St. Loe, Bath, Avon BA2 9BN

HEAD OF MUSIC

Applications are invited from suitably qualified persons for the post of Head of Music. The successful candidate will be responsible for the teaching and supervision of students in the Bath College of Higher Education. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

WEST SUSSEX

INSTITUTE OF HIGHER EDUCATION

COURSE TUTOR IN S.F.L.

Applications are invited from suitably qualified persons for the post of Course Tutor in S.F.L. The successful candidate will be responsible for the teaching and supervision of students in the Institute of Higher Education. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

BEDFORDSHIRE

EDUCATION SERVICE

DEPARTMENT OF POLITICAL SCIENCE

LECTURER II IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified persons for the post of Lecturer II in Mechanical Engineering. The successful candidate will be responsible for the teaching and supervision of students in the Education Service. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

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OXFORD

KEBLE COLLEGE

E.P.A. JUNIOR RESEARCH FELLOWSHIP

HEAD OF MUSIC

Applications are invited from suitably qualified persons for the post of Head of Music. The successful candidate will be responsible for the teaching and supervision of students in the Keble College. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

WEST SUSSEX

INSTITUTE OF HIGHER EDUCATION

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Royal Naval College Greenwich, London, SE10 9NN

Research Appointment in the Nuclear Marine Technology Unit (Department of Nuclear Science and Technology)

HIGHER RESEARCH SCIENTIST/RESEARCH SCIENTIST MATHEMATICAL MODELLING

A new post has been created in a small team working on the development of a mathematical model for a slow speed marine diesel engine. The appointment will be for an initial one-year period with the possibility of an additional two-year extension. Qualifications and Experience: Candidates must have a First or Upper Second Class Honours degree in a numerate discipline and be familiar with the use of computing techniques to analyse engineering systems. Candidates for Higher Research Scientist must have also at least two years' post-graduate experience. Salary: Higher Research Scientist—from £6,975 to £7,999 plus Outer London Weighting Allowance of £24.26 per annum. Research Scientist—from £4,809 to £5,480 plus Outer London Weighting. The Department has excellent and comprehensive facilities for computing and simulation studies with a new EAL HYSHARE-800 Hybrid Computing System. There will be opportunities, where appropriate, for the successful candidate to register for a higher degree. Single accommodation may be available in the college, which provides excellent sports and social facilities. Requests for further details and application forms should be made to: The Ministry of Defence, C/M/S113, Room 318, Savoy Hill House, Savoy Hill, London WC2R 0BX. Reference: 453/01/15. Completed application forms should be returned by 13th March 1981.

Trent Polytechnic

DEPARTMENT OF LEGAL STUDIES

RESEARCH ASSISTANT/DEMONSTRATOR

(£4,683-£4,884-£5,085)

Social Security for the Migrant Worker in the EEC

A good honours graduate required to examine areas of European Community Law related to Social Security for Migrant Workers in the context of Community Social policy and its effect on relevant United Kingdom Law. The successful candidate will be expected to register for an MPhil/PhD. Further details and form of application from the Assistant Director (Administration) Trent Polytechnic, Burton Street, Nottingham NG1 4BU.

Personal

IMMEDIATE ADVANCES

£100 to £20,000

Write terms on request

REGIONAL TRUST LTD

51 Dover Street, Piccadilly

London W1A 4RT

Phone: 01-492 8934

Colleges and Departments of Art

LONDON

ROYAL COLLEGE OF ART

Applications are invited from suitably qualified persons for the post of Lecturer in Art. The successful candidate will be responsible for the teaching and supervision of students in the Royal College of Art. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

Librarians

LIVERPOOL

THE POLYTECHNIC OF LIVERPOOL

LIBRARY SERVICES

SENIOR LECTURER

Applications are invited from suitably qualified persons for the post of Senior Lecturer in Library Services. The successful candidate will be responsible for the teaching and supervision of students in the Polytechnic of Liverpool. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

General Vacancies

TRANSLATORS

Chinese to English (French, German, Italian, Spanish, etc.)

Applications are invited from suitably qualified persons for the post of Translator. The successful candidate will be responsible for the translation of documents. The post is full-time and involves a commitment of 35 hours per week. Salary: £11,000 per annum. Closing date: 20th March 1981.

Overseas



THE NEW SOUTH WALES
INSTITUTE OF TECHNOLOGY
SYDNEY, AUSTRALIA

SENIOR LECTURER IN BUILDING ECONOMICS

The Faculty of Architecture and Building conducts professionally oriented honours degree courses in Architecture, Building, and Quantity Surveying, and a graduate diploma course in Urban Estate Management. The academic establishment is 21.

Applications are invited for the position of Senior Lecturer within the Department of Quantity Surveying, which will shortly become part of the new School of Building Studies. The successful applicant would be expected to contribute substantially to the development of the School's activities particularly in those areas concerned with economics and finance.

Applicants should possess an appropriate degree (preferably a higher degree by research) together with a professional qualification and experience in an area related to quantity surveying such as contract administration, design economics, control of resources, cash, property finance, or development economics. Experience of teaching at tertiary level would be a significant advantage.

The salary for this position will be in the range \$425,000 to \$429,917 per annum.

Fees and a contribution towards removal and initial accommodation expenses are provided for overseas appointees. A Housing Loan Scheme is also available. With consent of Council academic staff are permitted to undertake limited consultancy work.

Applications close on March 31, 1981. Applicants should arrange for three confidential referees' reports to arrive by the same date. Written applications should include: address; phone number; personal particulars; evidence of qualifications; publications; experience, research work undertaken and the names and addresses of the referees concerned. Applications and referees' reports are to be sent to: The Agent-General, N.S.W. Government Offices, 28 The Strand, London WC2N 2LZ, United Kingdom.

UNITED ARAB EMIRATES UNIVERSITY LANGUAGE CENTRE

The U.A.E. University in Al Ain, U.A.E., invites applications from suitably qualified men and women for the academic year 1981/82 (starting 1st September 1981) for the following posts in the language centre: TEFL/TEFL TESTING AND EVALUATION, MEDIA PRODUCTION AND SUPERVISION, ESP IN SCIENCE, AGRICULTURE, ENGINEERING, BUSINESS/ADMINISTRATION.

Qualifications and Experience: M.A. in TEFL or Applied Linguistics (or relevant first degree and postgraduate TEFL qualification) plus at least two years' TEFL/ESP teaching at college/university level. Experience in course design/materials production an advantage. Applications from teaching colleges especially welcome.

Teaching and course design of TEFL/ESP to university students and adult evening classes, ranging from elementary to Cambridge proficiency level.

Salary and Benefits: (a) Total monthly salary from 6,000 to 7,475 dirhams (depending on qualifications and years of experience); (b) Free air-conditioned accommodation (with free water and electricity included); (c) Return economy air tickets every year; (d) Free medical care for staff and dependents; (e) Gratuity of one month's basic salary for each year of service.

Applications, together with authenticated copies of certificates, testimonials, and a recent passport size photograph, should be sent to the date of this advertisement to the Secretary General, U.A.E. University, P.O. Box 16661, Al Ain, United Arab Emirates.

The Department of English of the University of Würzburg (West Germany) has a vacancy as from 1st November, 1981, for a

LECTOR FOR ENGLISH

The successful applicant will be expected to teach courses in English grammar and usage, essay-writing, translation and British institutions. Salary will be on the scale B41/2a. Applicants must have an honours degree in German and/or English and preferably qualifications and teaching experience in TEFL. Applications, accompanied by a curriculum vitae and the names of two referees, should be sent to the following address: Dr. J. H. Müller, Fachbereich Englisch, Universität Würzburg, 8700 Würzburg, West Germany, latest 15th March, 1981.

Dr. J. H. Müller
Fachbereich Englisch
Universität Würzburg
8700 Würzburg, West Germany

COLLEGE OF THE BAHAMAS STAFF VACANCIES

The College of the Bahamas invites applications from suitable candidates for the following positions: September 1981. All positions require that applicants are able to teach up to first year University level.

I. 1 LIBRARIAN

to be responsible for the overall administration of the Libraries at both campuses. Familiarity with Dewey Decimal System and Sears Subject Headings is essential. Candidates should have a Master of Library Science Degree and five years experience.

II. 2 LECTURERS IN ACCOUNTING

Candidates should either hold a Master's Degree in Business Administration with a major in Accounting or equivalent professional qualifications in Accounting.

III. 1 READING SPECIALIST

to be responsible for the organization and supervision of a Reading Laboratory.

IV. 2 LECTURERS IN ENGLISH LANGUAGE/LITERATURE

to teach Language and Literature.

V. 1 LECTURER IN TECHNICAL ENGLISH

to teach Language to Industrial Arts students.

VI. 1 LECTURER IN FRENCH/SPANISH

to teach French and Spanish.

VII. 1 LECTURER IN PHYSICS

to teach Physics and Mathematics.

VIII. 1 LECTURER IN ELECTRICAL ENGINEERING

to teach three-phase electrical courses to aspiring electricians.

IX. 1 LECTURER IN ELECTRONICS/ TELECOMMUNICATIONS

to teach technician-level work to liaise with industry, to assume the responsibility of a workshop or laboratory and to train a laboratory technician.

X. 1 LECTURER IN BUILDING TECHNOLOGY

to teach Architectural Drafting and Design and Building techniques at the Craft Technician and Diploma level.

XI. 1 LECTURER IN GEOGRAPHY/ SOCIAL STUDIES

to design and implement courses in both areas. Experience in teaching Social Studies as an integrated subject at the High School and post High School levels is desirable.

XII. 1 LECTURER IN SOCIAL WORK/SOCIOLOGY

to design and teach courses in both areas. Candidates must have a Master's Degree in Social Work/Sociology and at least three years teaching experience in the related areas.

XIII. 1 LECTURER IN SOCIAL PSYCHOLOGY

to design and implement courses in Psychology, Social Research and Mass Communications. Ability to teach Social Work is desirable.

XIV. 1 LECTURER IN POLITICAL SCIENCE

to design and implement courses in Political Science including subjects of: local content. Ability to teach Social Studies is desirable.

Candidates for Lectureship in the Academic areas should have qualifications up to the Master's Degree level in the subject, plus at least one year of teaching at the College level.

Candidates for Lectureship in the Technical areas should have a University degree or the equivalent in an appropriate professional field, plus at least two years of postgraduate industrial or teaching experience.

Although it is desirable that all candidates should have the above qualifications, experienced candidates with lower qualifications may also be considered.

The salary range for Librarian runs from \$14,800 by \$360 to \$16,350. Salary range for Lecturers runs from \$13,300 by \$500 to \$17,800 per annum.

Interested candidates should submit current resumes together with written work references and up-to-date transcripts by 15th March, 1981, to The Personnel Officer, College of the Bahamas, P.O. Box M-4412, NASSAU.

nihe
limerick



EUROPEAN STUDIES KEY ACADEMIC APPOINTMENT

The College of Humanities provides a wide range of programmes leading to degrees in European Studies, Public Administration and Regional Studies.

This key academic appointment is in the area of European Studies. The person appointed will be expected to play a leading role in developing teaching and research in the European Studies programme. This programme at degree and postgraduate levels places special emphasis on contemporary Europe, particularly on the European Economic Community.

Applications are invited from those with advanced academic qualifications, appropriate publications, and a proven record of achievement.

The governing body will confer the title professor on the appointee. SALARY SCALE: IE15,520-IE18,519 p.a.

Application material, available from the Personnel Office, The National Institute for Higher Education, Limerick, Ireland, to be completed and returned by 30th March, 1981.

NATIONAL UNIVERSITY OF SINGAPORE PROFESSORIAL APPOINTMENTS

Applications are invited for appointments to a full Professorship in each of the following Departments within the respective Faculties:

Department of Physiology (Faculty of Medicine)

Department of Building and Estate Management (Faculty of Architecture and Building)

Department of Zoology (Faculty of Science)

Department of Japanese Studies (Faculty of Arts and Social Sciences)

Department of Business Administration (Faculty of Accountancy and Business Administration)

Applicants should possess outstanding academic qualifications, have considerable University teaching/research experience and should have published works of merit. The successful candidate will be expected to provide leadership to the teaching and research programmes of the respective departments.

Annual emoluments range from \$570,670-91,970. The initial salary depending on the candidate's qualifications and experience. These emoluments include allowances recommended by the National Wage Council and a 13th month allowance of one month's salary in December of each year.

For staff appointed on normal contract, employment on the permanent establishment may be considered after an initial three-year contract. Leave and Medical benefits are provided.

Under the University's Academic Staff Provident Fund Scheme, a staff member contributes at the present rate of 15% of his salary, subject to a maximum of \$340 p.m., and the University contributes 20% of his monthly salary. The contribution is tax-exempt. The staff member may elect to opt out of the scheme. The staff member's contribution to the staff member's credit in the fund (including the University's contribution) may be withdrawn when he leaves Singapore/Malaysia permanently.

Candidates should write to: The Head, Recruitment Unit, National University of Singapore, Kent Ridge, Singapore 119077, giving full curriculum vitae and also the names and addresses of three referees.

UNIVERSITY OF NATAL

Department of Mechanical Engineering, Durban, South Africa

Applications are invited from suitably qualified persons for the position of:

DI/NI PROFESSOR in Solid Mechanics

The salary scale attached to this post is: R17,000 to R22,000 per annum (approximate conversion rate of 1:1.10 to R2.20).

The commanding salary notch will be dependent on the qualifications and experience of the successful applicant. In addition, a service bonus of 33% of one month's salary is payable subject to Treasury regulations.

Application forms, further particulars of the post and information on pension, medical aid, housing, staff benefits, leave, etc., are available on request from the Registrar, University of Natal, P.O. Box 1600, Durban, 4001, Natal, South Africa, with whom applications should be sent.

Applicants should be registered as being not later than 1st May 1981, quoting the applicable reference number.

DI/NI SENIOR LECTURER in Mechanical Engineering

The salary scale attached to this post is: R12,500 to R15,000 per annum (approximate conversion rate of 1:1.10 to R2.20).

The commanding salary notch will be dependent on the qualifications and experience of the successful applicant. In addition, a service bonus of 33% of one month's salary is payable subject to Treasury regulations.

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Union view

The pressing demands of relevance

Pressure is increasing upon all our educational institutions, from schools to universities, to ensure that the education given to students and pupils is "relevant" to everyday life. From the Government (and from the previous government) through the CBI to even some academics, the cry of relevance is heard in ever increasing volume.

Now nobody would deny that education should be relevant—the difficulty is that this term is defined in different ways by different people. The truth of the matter is that the pressures to which I refer are all geared into turning the educational system into one massive training camp for specific vocations in work-life. To put it into cruder terms, all these latter day saints want to do is to provide fodder for the factories, offices and corporations of this country.

From the universities' point of view, we have of course always recognized that there is a vocational aim in much of the work carried out and in so many of the courses provided. After all, in the early days of universities, the education was aimed at providing training and education for the professions—the church, medicine and the law.

If one looks at the courses provided by all United Kingdom universities today, some 60 per cent can be said to have a specific vocational aim. At the same time, however, there has grown up alongside the vocational education a much broader sweep of study aimed at advancing the frontiers of knowledge by teaching and research and by stimulating individuals to think and assess in a way that might not be geared to a specific vocation, to turn out into society people who will add to the quality of life and help raise aspirations towards a better society.

This may sound pompous or pretentious but if our universities for

get these aims, forget that one of their main functions is to advance the frontiers of knowledge, forget that their task is not to turn out persons who will go to work, then our society would be much poorer. When one challenges these "realists" in specific terms, one realizes on what weak grounds they stand and how they have not thought through the propositions that they are putting forward.

Some time ago I had the opportunity of proposing the cause of the universities before a group of all-party MPs. The criticisms made of the universities by many of these MPs was that we in the university sector were clogging the system by including too many subjects that were not relevant to the real world.

Now the universities' point of view is that the education system is too narrow and too geared to the vocational aim. It is too much of a training camp for specific vocations in work-life. To put it into cruder terms, all these latter day saints want to do is to provide fodder for the factories, offices and corporations of this country.

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the schools a little less often for the "quality" of the material they receive. And perhaps the teachers in the forwarding curriculum suggestions will use this particular statistic to make a productivity point to Mr. Carlisle. It cannot be good for standards to expect such continuous periods of concentration from teachers; and it cannot be economic sense to leave trained teachers on the dole, when standards are put so deeply in jeopardy.

The other place of open government—the news that ministers were so well able in their plans to take all the politicians and some colleges out of local government altogether—was one of the more spectacular cabinet committee leaks of recent years. The encouraging thing about the leak is that there is at least someone in government who cares enough about the delicate relationship between further and higher education in Britain to take the trouble and the risk to feed it all to THES. If the proposals did slip last week, the cabinet committee, it could only be because the whole scheme runs counter to all the basic tenets of Thatcherism. If a Labour government had suggested nationalizing £400m worth of local authority real estate, and putting it under a brand new executive quango, the whole exercise would have been drowned in Conservative howls of decision. Privatization, devolution of decision-making, getting Whitehall out of local decisions is meant to be the watchword these days. I can only put it down to a deep sense of inferiority amongst the "fundamentalists" of the DES. Almost uniquely in Whitehall, they don't run anything directly, and the importance is less than that of the Secretary of State's memo to his colleagues which somehow drifted its way into the columns of THES. The cuts document proved a bombshell. Yet it is just that sort of information which ought to be available every year—as I suspect it will, now that pressure from the Select Committee and the local authorities has forced it into the open for the first time. It is being overworked, they should read that part of the report which shows more and more teachers are teaching 46 periods in the light of it, universities will blame

that are carrying out basic and fundamental research over a wide field of disciplines. Although this research may not train people to be anything else but researchers, it is not appreciated that this basic research underpins whole areas of our national life—whether in industry, commerce, science, the arts and entertainment, or government at local and national level.

There are those who would wish to do away with or diminish this role of the universities and strictly limit the number of people engaged in these kinds of activity. These tendencies must be resisted and fought not only for the sake of the universities but because it is on this battlefield that there will be determined the type of educated man or woman we shall have in our society both now and in the future.

At one time, those who were involved in the struggle for educational advance were concerned with fighting the concept that one could divide students and pupils into the hewers of wood and the drawers of water on the one hand and the intellectual elite on the other.

Some justice this exercise as being all that the universities do at the present time and must suffice until the better days come.

For a country where oil revenues are pouring out of ears, where we are not below our feet almost to the centre of the earth and where we produce nearly 60 per cent of our own food, this argument about not being able to afford an education system that is concerned with the quality of life must be rejected. We reject the need to train our students for the professions—quite the contrary. What we do say, however, is that we must also do our best to educate our students to be thinkers, to be human beings and at the end of the day that may well turn out to be our more important contribution to the society in which we live.

Laurie Sapper

The author is general secretary of the Association of University Teachers.

Rupert Murdoch, last week. He seems deeply committed to the supplements and this cheered us all up no end. We—the Select Committee—will use this, that is both need each other to operate effectively. But the Murdoch encounter added to a week of political disorientation: here's Rupert, now, allegedly, a Thatcherite: Mr. Fynn says Mrs. Thatcher is a modernist. The social democrats (a term once of the far left) tell us that they're moderates too and they joined the party of RBT Tawney and Labour isn't like that anymore, it's more extreme. Yet Tawney's great wish was to abolish the House of Lords and the public schools. So if our social democratic friends win an overwhelming victory at the next election, they could just try that for starters. Labour would support them. But then why didn't they do it last time? Then still, a few about who stands for what and where the middle ground has gone.

In Blackpool, we had the benefit of the wit and wisdom of Janey Suchan, the only Labour Euro-MP on the Euro-Education Committee. She was eloquent about its consistent attempts to exceed its narrow mandate, and characteristically dour about the Commission's yen to interfere in domestic education policy. But then a little things Europe sometimes gets right when we get them wrong. For Richard's new portfolio unfurls—uniquely so far as I know in Europe—the Commission's education and training responsibilities. Though the former are pretty meagre, the move can only be for the good.

A deep hypocrisy has always permeated education and training in Europe—the one being for the middle, the other for the working classes. Universities run training courses just like the MSC, but far too rather than bottom jobs. Now that that brilliant Welshman, Ceri Hywel Jones is starting to wash away this hypocrisy on the European plain, as they would put it, perhaps Mr. Carlisle and his colleagues should see what they could do towards helping the idea along on the level of our nation state. The *Macfarlane Report* hardly touched the problem: MSC trainees, they said, were not students. Please try again.

Don's diary

Monday

I drive the two miles or so to the campus beneath dull, cheerless skies. I wonder whether we are in for one of those appalling winter weeks which foreigners from brighter climes cannot easily imagine until they actually experience the full horror. Greyness is surely the worst aspect of our climate. Our cold, and even our rain, are really quite moderate. But the sheer uselessness of vast tracts of the English winter is at times definitely dispiriting. Fortunately, the antics of the human race, and not least its academic branch, can usually be relied on to provide something of an antidote.

Conversation in the common room at lunch-time focuses on two themes: the leftward drift of the dear old Labour Party, as illustrated by last weekend's conference at Wembley, and the now completed screening of *The History Man*, which must, I suspect, have been obligatory viewing for all who work in the new universities. I suppose that as an historian—a real history man—I ought to feel annoyed that Bradbury chose to attach this label to his fatuous sociologist, whose feeling for any kind of history was so obviously non-existent. Several of my colleagues are of the opinion that the series has been mildly damaging to the new universities. Has it? I vaguely hope that Mrs. Thatcher has not been watching on Sunday evenings.

Back at home in the evening I switch on the television for my Monday date with *Star Trek*, and reflect, more than once, that Captain Kirk is an immeasurably more interesting character than Howard Kirk.

Tuesday

A teaching day, but I interrupt it at noon to go for a jog. Our excellent sports centre, the finest addition to the life of the university in recent years, is only a short walk from my room, and the two-mile circuit of the campus perimeter is very agreeable—indeed, almost idyllic when the sun is out, which today, of course, it is not. The shower room at the sports centre is one of those forgotten corners of the university where important political business is sometimes transacted. A few weeks ago, a chance encounter with a colleague under the showers enabled me to make significant progress with a minor campaign which has since triumphed—the cause being no less a matter than the reinstatement of the university croquet lawn. It is a good illustration of the role of accident in history.

Wednesday

My clock-radio goes on, as usual, at 7.27. Half-hearing the name of Mr. Tony Benn in the headlines, I remember that the former peer is due to visit the university today to address the local faithful. The brittle, so dreadfully predictable chatter of the *Today* programme drives me swiftly from my bed. For those who have trouble in making an early start to the day, I have some advice. Buy one of these admirable clock-radio things, place it on the far side of the bed and keep it permanent.

Radio 4. It works every time.

At intervals during the day I debate whether I honestly want to go and listen to Mr. Benn, and find that I honestly do not. Several friends reproach me. After all, they say, this sub-millennarian *Questing Beast* (fans of Malory will know what I mean) could yet be a power in the land. "Power is never ridiculous," said Napoleon, but then he was fearfully biased on this score. To me it has always seemed ridiculous as often as not. Better a new record than an old one: I return home and spend part of the evening listening to the marvellous new recording of Mahler's Tenth by Simon Rattle and the Bournemouth Symphony Orchestra. It has some sublime moments. Did Mr. Benn's speech? No doubt I shall learn tomorrow. The local faithful are bound to tell me.

Thursday

Echoes from the great row in the English Faculty at Cambridge continue to reverberate across the fifty or so miles of pastoral landscape that separate us from that spot. After my morning classes, I lunch with a literary colleague well versed in these matters. He

Laurie Taylor



SSRC Research Grant Application.
No. 1063/2/4B.
Director of Research: Professor
Ralph Freaby.

The principal aim of this research project is to conduct a cross-national examination of the fundamental problems inherent in the economic infrastructure of the European Economic Community.

For some years now (say, six or seven) professional social scientists have been concerned with the possible ambiguities and even contradictions in the EEC's simultaneous commitment to a general free market and to the implementation of a selective regional fund.

In this project these ambiguities and contradictions (the ones just mentioned above) will be highlighted by a case study of one particular example of regional entrepreneurship. This will be sited in a country which, like the United Kingdom, feels itself to be a victim of EEC budgetary discrimination—namely, Italy.

The specific area which has been selected for attention is the Florentine handbag industry. (Although handbag sales will be taken as a principal indicator of the level of economic activity, belts and wallets will also enter into the final input-output matrix.)

Professor Freaby has over the years, spent a considerable amount of time engaged in observational work in various parts of Northern Italy (Siena, Lucca, Rapallo, and one little place in the Cinque Terre which he thinks is called something like Vernazza). He also has a working knowledge of the commercial Italian (*Quanto costa, due cappuccini, una grappa, vorrei una camera matrimoniale con bagno, e la ora partita il treno per Venezia*) and a thorough familiarity with Italian customs and conventions (museums closed on Mondays, drinks cheaper at the bar, the hot tap in hotels is likely to be marked *C, diletissimo* trains take longer than others, etc.).

It is envisaged that he will spend approximately three months of each of the three years of the project's duration in Northern Italy. The months of July to September have been carefully selected as those in which the handbag industry is traditionally most viable.

Although the research will be principally conducted from research facilities near Florence (just up in the hills, actually), frequent visits to neighbouring seaside resorts will also be undertaken to provide detailed evidence of cross-boundary flow. The parameters of the model will (of course) be estimated by a three-stage least squares procedure.

Professor Freaby has been fortunate in obtaining the services of Mr. Mario Drogue as a research assistant on the project. Mr. Drogue's involvement will be particularly valuable in that this will be his first experience of the Florentine environment and of the research methods of the project. (She is by training a physiologist.) She has already indicated that she is "reasonably interested" in handbags.

The financial details of the project, including travelling and maintenance expenses for the project director and research fellow, are outlined on a separate sheet. As the committee will see, instead of the usual institutional location of funding it is felt that a project of this nature might best be served by an endowment being directly payable to Professor Freaby in a form which would ensure their immediate application to on-the-ground research exigencies. (This is detailed in the section headed "Used Notes.")

Yours sincerely
Laurie Taylor
Ralph Freaby (Professor).

LETTERS TO THE EDITOR

Degree courses in sport and recreation

Sir,—Ngalo Crequer's review of degree courses in sport and recreation studies (*THE TIMES*, February 6) contained a few omissions, errors and spurious inferences. Let me put the score right before her words slide imperceptibly into history.

The first British degree in this field of study was the BSc(Hons) in sport science at Liverpool Polytechnic, which predated her claim by two years that Genesis occurred in 1977. Consequently her observation that employment prospects have been assessed only by surveying potential employers is less than adequate. Liverpool has produced three outputs of graduates who have proceeded to 100 per cent employment and/or postgraduate courses in four continents. As you may by now have guessed, Ms Crequer's observation that such courses evolved from physical education teacher training courses also does not apply to Liverpool. The course was planned from scratch, and was not a reorganisation of a department created specifically to teach the degree. It has since become clear that there are significant differences between courses introduced in this way and those arising from the diversification of teacher training resources.

By juxtaposition, it was also implied that Sebastian Coe studied for such a degree at Loughborough University. This is not the case, since Coe read for a degree in economics. He was, however, an outstanding example from the long history of British sportsmen who have competed with distinction whilst fulfilling the normal academic requirements of a degree course. That it is possible to do so is beyond question. What the current crop of sport degree courses

achieves is the creation of opportunities for those who are gifted both physically and intellectually to develop these talents simultaneously in higher education. This may be, as in the case of the Trent and Brighton courses mentioned, the development of an essential aim; or on the other hand, as in the case of Liverpool and others, the student merely uses the physical activity of himself and others as a practical context for his conceptual studies. In the latter case, the studies are intellectual, assessment is by the written or spoken word and the rigour is seen to be on a par with any other academic degree course. In 1978 the Royal Aeronautical Society and the Ergonomics Society each gave their award for the best student project in the world for a national competition to a Liverpool sport science graduate.

Both the media and conservative academia have sniped occasionally at sport degrees. I have studiously ignored such attacks and this is the first time I have responded to what is essentially a very fair and welcome article. Without ever having been advertised, the Liverpool BSc(Hons) in sport science has recruited its full complement with over 250 students in its first year. The academic performance of the students is gratifyingly high and the employment record is optimal, particularly since almost all graduates actually do proceed to work in the sport/recreation/physical education field. Within three years, Liverpool sport science graduates have achieved masters degrees in England, America, Canada and Australia and the first PhD is anticipated in a year or so. Degrees in sport and recreation

are here to stay. Other disciplines—look to your laurels.

Mens sana in corpore sano.
Yours faithfully,
DR VAUGHAN THOMAS,
Head of Department of Sport and Recreation Studies, Liverpool Polytechnic.

Sir,—I read with interest your article, "A Race Apart No Longer". While I appreciate that it is not possible for you to make exhaustive reference to all the courses and institutions that make a contribution in this very broad field it is surprising that you should omit the longest established specialist institution in England, Carnegie School of Physical Education and Human Movement Studies, Leeds Polytechnic. You will note from the various catalogues and CNAAs and polytechnic course handbooks that in addition to its traditional offerings in the field of education (three-quarter year Bachelor of Education degree, majoring in physical education, one year PGCE majoring in physical education, one year supplementary certificate in physical education, one year diploma in physical education) Carnegie also offers two non-professional degrees: three-year BA degree in human movement studies; three-year BA honours degree in leisure studies.

The structure of these two degrees is quite unique and offers students an unparalleled opportunity to study in the broad field of human action and performance in relation to sport or in the broad field of leisure and recreation. To my knowledge no other course provides such opportunities. Yours faithfully,
C. E. BOND,
Head, Carnegie School of Physical Education and Human Movement Studies, Leeds Polytechnic.

Local authority control

Sir,—To say in your leader (*THE TIMES*, February 6) that "the Government does not like local authorities to be too big" is to misunderstand a fundamental objection to local authority control.

Local education authorities are inappropriate instruments for the management and funding of polytechnics and other colleges of higher education because the given to local authorities for education being a "national service locally administered". Polytechnics are not local organisations and are not suitable for local administration. They have local and regional roles—in some cases of considerable importance and distinction—but they are not primarily local in purpose nor in the recruitment of students.

To any degree, local authority control for higher education is precisely summed up by my change of terminology on which we pour such scorn. "Advanced tertiary education" is a much more appropriate concept for "public sector higher education" than "higher education" which is a local service but higher education may only have a local impact when its overriding purpose transcends geographical boundaries. The autonomy of local authorities (which is an important concept in the British model of government) leads to variability in quality and control of institutions which cannot be excused by reference to local needs. Apart from the five in Inner London, no polytechnic is able to be judged by its own standards. Any local authority which is not prepared to accept its own responsibility for its own institutions, i.e. funding of schools and further education colleges where there are many in one area. The ineptness of funding and detailed control of institutions which exist between the two is a constant cause for favouring change to national policy implemented through national funding. Yours faithfully,
HARRIET GREENAWAY,
Academic Registrar,
Bristol Polytechnic.

Engineering researchers

Sir,—You report (*THE TIMES*, February 13) that the chairman of the Science Research Council, Geoffrey Allen, is seriously concerned by the shortage of good quality research applications received from engineering researchers. Surely this must be a cause for celebration, rather than a cause for concern, that the number of applications for research, if it means anything, is increasing.

There will no doubt continue to be engineers who elect to go into industry rather than into research, and I am sure that the Science Research Council will properly continue to be a source from which funds may be drawn to support research.

Engineers who wish to engage in research, however, have traditionally sought opportunities from other sources, where they have been able to participate in a quality engineering research unfettered by adherence to regulations, procedures and restrictions which may or may not be relevant to the needs of the research.

It is a pity that the Science Research Council is not able to provide the necessary financial resources to support the research which is so vital to the development of the country. The Science Research Council continues to depend on the generosity of its supporters and the Government to provide the necessary funds. It is a pity that the Science Research Council is not able to provide the necessary financial resources to support the research which is so vital to the development of the country.

Finally, it may be appropriate to mention that we received useful assistance during the first five years from a senior member of the department at UMIST who acted as one of our external examiners. Yours faithfully,
DR P. L. R. MOORE,
DR J. A. SIMMONS,
Joint course Leaders, MScs in Instrumentation, Polytechnic of Central London.

Management education

Sir,—I am writing to correct an impression left by Nigel Campbell of the Manchester Business School (*THE TIMES*, January 30). While I agree that MBA courses provide only a small proportion of the management education at present, I should like to point out that the part-time MBA which Mr Campbell's institution proposes is by no means unprecedented. There are at present five part-time MBA-type general management masters degrees offered by polytechnics.

At Middlesex we have recently recruited the first intake of 72 students onto our part-time masters in business management. The demand for this course is such that I am sure that we and other polytechnics offering similar courses will be able to make a major contribution to management education at this level. Yours faithfully,
D. G. HARPER,
Dean, Faculty of Business Studies and Management,
Middlesex Polytechnic.

Sir,—Your supplement on management education while welcome, was strangely disappointing. True, Sir Terence Beckett acknowledged the low quality of British management education, but his assessment of responsibility is still unbalanced. Little was

however, said of the quality and problems of management education, which after 20 or 30 years of effort does not seem to have achieved a great deal.

I would have liked to have seen some of the major problems which face us analysed. ● Just what, for example, is the right relationship between education and industry and how can we achieve it? ● Are business education and management education the same thing? If not, what is the difference? ● How effective are short tailor-made vocational courses, which now seem so popular, in actually changing behaviour? ● How to choose what is the right course for a manager rather than opt for one of the very expensive offerings, which seem to excel only in making a major contribution to management education at this level. Yours faithfully,
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Politics at Stirling

Sir,—(The report by Ngalo Crequer (*THE TIMES*, January 23) concerning the implications of projected financial cuts contains at least one major error. Far from the future of Stirling's politics department being under threat, as apparently stated by the Federation of Student Nationalists, the university has recently taken steps to set up the department. The development of an interdisciplinary political studies programme, drawing on staff from several subjects but under the aegis of a steering committee chaired by the university professor, is part of the university's strategy for consolidating its academic progress in the social sciences. Yours faithfully,
D. W. G. TIMMS,
Acting Principal Stirling University.

Research completed

Sir,—My attention has been drawn to the fact that I was credited (*THE TIMES*, January 23) with having received a grant from the SSRC for research on understanding. It is very nice to be congratulated by old friends on this, apart from one

fact: that the grant in question became operative in 1978 and the research was completed in 1979. Eight papers have appeared in journals so far, either directly or indirectly derived from this. Yours faithfully,
CHRISTOPHER ORMELL,
19 Kanton Road, Barley, Reading.



HIGHER EDUCATION SUPPLEMENT
New Printing House Square, London WC1X 8EZ. Telephone 01-837 1234

More cuts or Cabinet cracks?

Nineteen-eighty-one will be a crucial, even a pendulum year for higher education. In 12 months' time it will be clear whether the cuts have finally begun to bite and for the first time in more than two generations, and arguably in this century, higher education has entered onto a period of decline; or whether the Government has lost its monarist nerve and carried out its inevitable U-turn with all that such a change would imply for the future pattern of public expenditure.

At present either outcome is equally likely. As last week's Her Majesty's Inspectorate report into the effects of the cuts demonstrated, higher education has yet to suffer a serious decline in standards of material provision. Indeed, it is important to stress this point, if only to dispel the gathering shadows of demoralization. We are not yet at the end of the Robbins expansion. Student numbers and applications are still increasing, and because of the vagaries of copping the pool and the stubborn generosity on the part of some local authorities (like the ILEA) the decline in public support has so far been slight.

What has happened to the polytechnics and colleges applies a fortiori to the universities. Here demand is, if anything, even more buoyant. Certainly there is no premonition in the available statistics of the yawning demographic decline of which the doomsters, inside and outside the universities, so masochistically warn. Rather the evidence today is that the universities at any rate will be able to leap over the demographic gulf of the 1980s almost as easily as they did the equally ugly chasm of the later 1960s.

Salaries and the six per cent limit

University teachers have now been waiting almost five months for the salary increases due to them in October, and the prospect of a quick and acceptable settlement in committee B appears as distant as ever. This weekend the council of the National Association of Teachers in Further and Higher Education is likely to follow the lead of the school teachers and put in a claim for a 15 per cent increase from April for polytechnic and college teachers. With the Government still insisting on its 6 per cent limit the prospect of an easy settlement looks equally remote. Rarely can pay negotiations for higher education teachers have appeared more intractable.

Of the two groups the university teachers seem to be stuck more deeply in the mire. They are a pay round behind, which last autumn has been an advantage. It has helped the Association of University Teachers to convince the Government they should be regarded as a "special" case and

the financial prospect is also not half as gloomy as the morale of the universities would suggest. The unit of resource has certainly been depressed further, but more in line with the gradual erosion that has been taking place since at least 1974 rather than with the new and sudden catastrophic decline. Overseas students' fees remain a major problem, but perhaps a manageable problem precisely because it is in such areas that the liberal consensus is still strong and so the Government's nerve is likely to give sooner.

This assessment will appear optimistic to many, even or especially to careful readers of *The Times*. It feels wrong maybe, but it is difficult to quarrel with its factual accuracy. Just another demonstration of the fact that the deterioration in higher education remains a psychological as much as a material one. It needs to be stressed, to the outside world, but more of all to ourselves, that higher education in Britain in late February 1981, remains buoyant, in demand, and (comparatively) well-resourced.

Of course, all those could change if the Government persists in its present public expenditure policies. Polytechnics and colleges will have to absorb real cuts now that their local authorities will be powerless to help them, even if they have the political will to do so. Mr Heseline's contradictory block grant. Staff redundancies and course closures, to be followed in 1982 or 1983 by institutional failures, will become inevitable.

In the universities such extremes will be avoided for some time ahead. But Dr Parker's magic in keeping up the resources grant cannot go on working for ever. The £30m cut announced at the end of last year will hurt, and subsequent tranches will hurt even more. The overseas students fiasco will continue to work its capricious way through the system, undermining quality and promoting inefficiency.

The always precarious restoration of university finances engineered by Fred Mulley and especially Shirley Williams will be washed away.

But it may not happen. The intention of the Government, of course, remains hidden in the gloom only occasionally and selectively illuminated by leaks from the Prime Minister downwards. But one thing is now very clear: higher education is not the only place where morale is low; the same appears to be the case in Mrs Thatcher's Cabinet. Plainly there is very deep and growing discontent among liberal Tories about the present direction of Government policies. While it is still extremely difficult to weigh their influence, we all feel it is growing stronger day by day. The prospect is not of wholesale revolt or even of obvious reversal of policy but of steady erosion of Mrs Thatcher's iron monarist determination by the drip-drip of the wets—aided, of course, by the flooding in of the real world of BSC and British Leyland, and by the quickening rhythm of politics as the election approaches.

Where such developments might leave higher education is murkier still. But if present punishment is shouldered aside by future investment as the dominant motif of Conservative rule, it can hardly fail to benefit. Even an entirely generalized relaxation of present restrictions on public expenditure to restore a measure of prosperity to Britain would benefit higher education as the dominant motif of Conservative rule, it can hardly fail to benefit. Even an entirely generalized relaxation of present restrictions on public expenditure to restore a measure of prosperity to Britain would benefit higher education as the dominant motif of Conservative rule, it can hardly fail to benefit.

Agreed upon or shared values thus provide a legitimization for the functioning of the institutions of society. They remove the need for force to their organization or management. Normative bonds are a kind of "moral capital" for society, expressed in interpersonal trust, belief in institutions, and the capacity to respond to crisis. When this moral capital is used up or is insufficient, interpersonal affairs will need to be regulated by laws and codes, and the capacity to cope with either internal or external crisis disappears.

Looked at another way, the emergence of codes and regulations covering the relationship between people or institutions can be taken as a signal of the breakdown of consensus or shared values. The law now clearly the case with the American house of intellect, as it is for American society at large. Because we have lost common values we are an increasingly regulated society. It may, however, not be too late to recover them.

There are many areas where the fact and the results of the codification of the academy, either self or externally imposed, are observable. The decline in the acceptance of the value of the independence, personal relations and the process of making personal decisions have become the most rigidly codified areas of the academy.

Lack of basic agreement between the academy and the state as to the nature of the academy, which has created mounting and wholly unrealistic reporting requirements. The absence of wide consensus as to the mission of our schools and colleges has also led to increased standardization of programmes with the result that in the name of achieving minimum standards, inflexibility may stifle creativity and the gifted or ambitious child may be held back to some common lowest denominator.

Holding on to the bonds of consensus



George Rainsford

There is a tide in the affairs of men discernible in the lives of nations, institutions, and individuals. We are caught in its maelstrom, and the great point is to hold onto the bonds of consensus. The judicial or political process thus lays down rules for the management of that tension and guides social behaviour away from private action destructive to the public good.

But for the academy as for the nation the effort to maintain the creation or the impact of codes of behaviour will get only to the symptoms of over-regulation. The cause is in the absence of adequately shared values and adequately expressed shared beliefs. We in the academy must be asking what were the values we believed in which we have lost, and why did we lose them. And we should be working on strategies to either recapture them or replace them with a new consensus. Out of the things in which we believed.

Agreement within the academy on these shared goals will help remove the impulse of faculty to organize and deal with administrators in an adversarial way. Agreement of the goals of the academy will help to remove the need for administrators to enforce regulations laid down by the state as a result of a shared disagreement as to those goals.

The move of the country to the right at the time of increased pressure on the academy to curtail costs and cur personnel will make the receding of these agreements more difficult. It may, however, make those agreements more necessary. If the nation and the academy are to be prevented from moving away from each other.

The recognition of the result of the absence of agreement on shared values is easier by far to accomplish than it is to state what those values and beliefs should be. Several things, however, are clear. Agreement must be imposed. A workable consensus is only the result of leadership accepted because of trust or is the result of wide and open participation. No real agreement can be reached within the academy or between it and the state if differences are seen as being exclusive rather than complementary. In any situation institutions must be seen as having rights to be protected from abuse by either students, or state bureaucrats. Students must be valued as an institution contributing to the growth and development of society, rather than as a refuge for irresponsible faculty or a welfare dispenser for underserving students.

The bedrock from which all this must flow is a recommitment to the value of ideas as a major driving force for society and the value of educated people (people with ideas) for the rebuilding, refinement and regeneration of society. The mission of the academy is both to conserve and to change, and society and the academy itself must digest both these necessities. There must be standards as to the educational success of the academy, can be measured against some agreed criteria. There must also be recognition of flexibility and openness to risk as essential ingredients of creativity and the possibility of failure as an inevitable consequence of risk.